

The role of networks in the entrepreneurial process

A case study of three Norwegian craft
breweries



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- A case study of three Norwegian craft breweries

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breweries

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Abstract

The aim of this thesis is to provide insights as to how networks affect the entrepreneurial process, and the purpose is to give evidence on how entrepreneurs use their network to be able to plan, start and operate a business.

This study is based on the combination of two strands of theory: entrepreneurship theory and network theory. The objective of the research is to apply these theories to craft breweries in order to find out how the network is used in entrepreneurial processes. It is argued that the industry is in possession of innovative capabilities by experimenting with taste, ingredients and barrel aging. The empirical data were collected by case study of three Norwegian craft breweries, and includes study of background materials as well as interviews with the respective entrepreneurs.

Based on the theoretical approach, prior experience is highlighted as the foundation of the entrepreneurial process, and where the entrepreneurs' network begins to develop. This thesis also provides evidence that the network is a vital part of an entrepreneur's decision to exploit opportunities and actually becoming an entrepreneur. During the planning, construction and expanding phase of the breweries, the networks function as an important element. One of the most interesting findings is the great importance of voluntary work conducted by people in the entrepreneur's network.

This study provides empirical evidence of the importance of having a well-functioning network during the entrepreneurial process. The three entrepreneurs had different networks with various characteristics. Despite these differences, they all succeeded in establishing a brewery. The different features of the network enhance and facilitate the resource acquisition, and there is not a certain recipe on how to benefit from the network. When a network lacks the necessary actors, the entrepreneurs manage to broaden it to get access to the knowledge and information needed in the different phases of development.

Keywords: entrepreneurship theory - opportunity tradition – network theory - craft beer - entrepreneurial process – resource acquisition - voluntary work - volunteers.

Table of Content

1. Introduction	1
1.1 Background	1
1.2 Why Write About This Topic?.....	3
1.3 Research Question.....	4
1.4 Construction of the Thesis.....	5
2. Theoretical Framework	6
2.1 Entrepreneurship Theory	6
2.2 Network Theory	8
2.2.1 Key Concepts in Network Theory.....	10
2.2.2 Strong and Weak Ties	10
2.2.3 Structural Holes.....	11
2.3 The Entrepreneurial Process.....	12
2.3.1 Discovering Opportunities	13
2.3.2 Exploiting Opportunities	14
2.3.3 Resource Acquisition	16
2.4 Previous Research on Craft Beer.....	17
2.5 Analytical Framework.....	18
3. Methodology	20
3.1 Qualitative Case as Method.....	20
3.2 The Access to and the Choice of Case	20
3.3 The Research Design.....	22
3.4 Narrative Interviewing and Semi-structured Interviews	23
3.5 The Collection of Data	24
3.6 The Analytical Process.....	25
3.7 Validity and Reliability	25
3.8 The Cases	27
3.8.1 Nøgne-Ø	27
3.8.2 Haandbryggeriet	27
3.8.3 Hubertus	28
4. Empirical Findings and Analysis	29
4.1 Nøgne-Ø	29

4.1.1 Discovering Opportunities	29
4.1.2 Exploiting Opportunities	31
4.2 Haandbryggeriet	33
4.2.1 Discovering Opportunities	33
4.2.2 Exploiting Opportunities	35
4.3 Hubertus	37
4.3.1 Discovering Opportunities	37
4.3.2 Exploiting Opportunities	39
4.4 Cross-case Analysis.....	41
4.4.1 Similarities	41
4.4.2 Differences	42
5. Discussion	45
5.1 Previous Experience	45
5.2 Decision to Exploit.....	47
5.3 Knowledge and Information Search.....	47
5.4 Acquiring Resources	49
5.4.1 The First Brewery.....	49
5.4.2 Expanding the Brewery	50
5.4.3 Voluntary work	51
6. Conclusion	53
6.1 Limitations	54
6.2 Suggestions for Further Research	54
References	56
Appendix 1 – List of interviewees	61
Appendix 2 – Interview Guide	62
 Figure 1: Structural holes (Burt, 1992, p. 27).....	 12
Figure 2: Basic Types of Designs for Case Studies (Yin, 2014, p. 50).....	22
Figure 3: Multiple-Case Study Procedure (Yin, 2014, p. 60).....	22

1. Introduction

Entrepreneurship is of great importance in every economic cornerstone of the economy. It enhances competition, innovates, and creates new products and new jobs (Shane, 2003).

Entrepreneurship is a wide area of research and can be connected with many different approaches. When a person decides to start a business, he or she starts a process called the entrepreneurial process. Many factors influence the entrepreneurial process, one of them is the importance of a network that makes necessary resources accessible.

With this thesis, I seek to contribute to the understanding of the complex nature of entrepreneurship by focusing on the impact of networks. Behind every craft brewery, there are entrepreneurs that have been through an entrepreneurial process before they turn out to be an operating brewery. The objective of this thesis is to increase the understanding of the influence of networks in the entrepreneurial process for small businesses. The research is conducted by case studies of entrepreneurs behind three craft breweries in Norway. This research will focus on what kind of network they have, and how this is developed and exploited during the different stages of the entrepreneurial process.

1.1 Background

In Norway, a very interesting trend is developing within the brewing sector. Small local businesses have started to compete within a mature market, selling almost similar products three times the price, and people purchase it. The product referred to is called craft beer.

Craft breweries are small, and they are considered to be traditional and independent (Kleben, Nickerson, 2011). The craft breweries are now selling their products through the Norwegian Wine Monopoly and even in local grocery stores. Beer experts and beer-sommeliers, working titles that have been absent in Norway, are now writing blogs with recommendations on how to combine the correct beer with a meal (Hambro, 2013). Instead of just drinking beer, friends start comparing and discussing the taste components of the beer, and even brewing their own beer (NRK.no, 2013). Craft beers are great examples of innovation by experimentation with ingredients, barrel aging and other factors that affect the taste. Small, local craft breweries have been established as an opposition to the existing market supply of beer, and started to

produce more tasteful, different and special beers. Lets wind back and look at this phenomenon.

In 1856 there existed 343 different breweries all across the country, but many of the breweries were shut down or taken over by competitors during the 1900s. By the year of 1987 there were only 15 breweries that still produced beer (olakademiet.no, 2013). In 1912 the Norwegian government passed a “beerlaw” which made it illegal for people to brew their own beer without paying taxes, unless you produced malt from your own grain (Hatland et. al, 2014). This law had also a very strict definition of allowed ingredients in beer; water, malt, hops and yeast were the only allowed ingredients. These limitations are part of why every Norwegian beer are similar in taste. This law was partly repealed by the creation of the "Alcohol law" in 1989, which was implemented 1.1.1990 (Helsedirektoratet, 1989), although it did not include legalizing home brewing. The “beerlaw” concerning home brewing was completely repealed in 1999 and people were again allowed to brew beer for own consumption (Helsedirektoratet, 1999). This was a turning point and the beginning of the ‘homebrew movement’ and the ‘craft beer revolution’ in Norway.

Changes in the Norwegian laws have probably influenced the diversity and number of enterprises producing beer and other alcoholic drinks in Norway. As beer previously had a very strict definition of ingredients, beer and wine have now the same definition as alcoholic drinks, divided in classes based on the percentage of alcohol (Helsedirektoratet 2008). Changes in the laws made opportunities for increasing the number of ingredients in beer, enabling possibilities for new and more rich tastes. Now brewing beer as a hobby has increased tremendously within the Norwegian population. In 2000 only 46 brews were registered to the Norwegian championship in home brewing (Norbrygg, 2000), while the number of brews in 2014 were 351 (Young, 2014).

Since the beginning of the 20th century, there has been a boom of independent breweries within the market. In 2003, there were only approximately 15 breweries in Norway, while the numbers for 2013 suggest that there exist over 80 breweries (Grashol, 2014). That is mainly because of the influx of craft breweries. This has happened in a market where overall beer sales fell by a few percent every year. In 2013 there were released a total of 426 new craft beers to the marked (Young, 2014). The craft beer sales at the Norwegian Wine Monopoly have passed the industrial beer sales with 57.8% against 42.2% (Garshol, 2014). Even though

the growth has been enormous, craft beer is only a small part of the beer market with less than five percent of the total marked share (Young, 2013b).

1.2 Why Write About This Topic?

Entrepreneurs are found in every part of the society, from founders of multi-million-dollar companies to sole proprietorship. They all contribute to the development of the society by creating innovations, new businesses, jobs and providing economic growth. Research within this field will help us understand how entrepreneurship works and how it could be facilitated and enhanced. It will provide information about successful entrepreneurs and their entrepreneurial journey, which could provide evidence to the literature of entrepreneurship and networks.

Growth of small businesses are recognized as crucial to a nation's economic development and future prosperity (Coviello & Munro, 1995). Creating small, independent and local business is very beneficial for a country's economy. Even though the craft breweries only hold 10 percent of the market share in the US beer industry, they employ 50 percent of the workforce in the sector (Kleban & Nickerson, 2012). Norway prioritizes innovation and the formation of new businesses by facilitating the establishment of new businesses. Innovation Norway is the Norwegian Government's most important body for innovation and development of Norwegian enterprises and industry (Innovation Norway, n.d). One of their objectives is to help the entrepreneurs with networking and establish business relationships. The development of craft breweries has not yet been researched in Norway and should be of great interest to other scholars within the field of entrepreneurship and network theory, and my findings will provide evidence to this literature. There are many academic articles, papers and published work investigating the importance of networks in small businesses. Documenting successful entrepreneurs and their experience within this segment will provide important information to this field of research. It will provide an understanding of the specific importance of networks in Norway, and how they are used throughout the entrepreneurial process. Entrepreneurs are people with passion to create something new, their dedication and journey will be interesting to dig into.

A different approach is that the craft beer revolution may be viewed as a part of a broader development. People are demanding more local food and drinks, and are willing to pay more

for these unique products (Loureiro & Hine, 2002). Although, a broader analysis of this trend will be beyond the scope of the thesis. It is important to bear in mind that this development may be placed into a development present in many countries.

1.3 Research Question

In order to describe the impact of networks during the entrepreneurial process, the following questions has been raised.

Research question: **How did the entrepreneurs benefit from their networks in the entrepreneurial process of establishing a brewery?**

This thesis will provide an overview on how the entrepreneurs used their network on their journey towards operating a business. The different relations in the networks that existed in the different entrepreneurial phases will be documented. Did they share the same network, and did they use their network in a similar way? It is interesting to examine what kind of network the entrepreneurs hold, how they use it and if there are any commonalities in the cases. The empirical discussion will provide evidence on the importance of network. How did the entrepreneurs take advantage of their network? Which important network features led to success? Does this coincide with the different approaches in the network theory?

The answers to these questions will discuss how their network was the driving force in establishing a brewery, especially in getting hold of resources and relevant entrepreneurial information. This research may provide an understanding of the most important elements in their networks and connect it with former research on the field.

Behind every new craft brewery there is a dedicated entrepreneur with a unique history, and to get an insight in his or her dedication and strive for success will make a great contribution to relevant academic theory. By focusing on networks this research will provide a necessary and a more specific link between the two. Possibly, it will provide an increased insight of the two theoretical perspectives.

There are many ways to view entrepreneurship theory. The opportunity tradition of entrepreneurship has been selected as the theory in this thesis, because of the focus on the discovery and exploiting phase in the entrepreneurial process. Whether there is more to the opportunity tradition of entrepreneurship than the generally presented in the literature, will be

explored on the base of the research question. To focus on networks will lead the research in onto a specific path. The craft breweries have yet not been researched in Norway, therefore this particular research may provide evidence to the literature.

1.4 Construction of the Thesis

The thesis is divided into six chapters. This introductory chapter has provided an introduction and background of the topic in this thesis. The second chapter provides a full description of the theory concepts and relevant literature contributes to answer the research question. The theory of entrepreneurship and networks will be reviewed, together with ways to categorize the research findings into entrepreneurial phases, to provide the reader with an overall understanding of how the body of this thesis is structured.

Chapter three present a full description of the methodology. A description of how and why the particular cases were selected is provided. The research design will be described to clarify how the research was conducted and the reader will get an in-sight to my own reflections of the data collection process and analytical procedures. A short evaluation of the validity and reliability of the research will be presented followed by a short description of the cases selected to the data collection in the end of the chapter.

The fourth chapter will present the empirical findings related to the three cases. Each of the three cases will be examined, and discussed separately within the basis of the theoretical chapter, before the chapter is ended with a cross-case analysis highlighting differences and similarities. Chapter five is the discussion of this thesis, and it will relate the findings in chapter four with the theoretical framework. This chapter will answer the research question in detail and review if there are any new dimensions that may be added to the research field in entrepreneurship and networks. Finally, a conclusion will summarize the findings, reflect on limitations of the study, and make suggestions for further research.

2. Theoretical Framework

This chapter presents the theory and the theoretical perspectives used in this thesis. First, the development of entrepreneurship theory is briefly discussed. Further on, this chapter introduces network theory, and explains the key concepts of network theory used in the research. Additionally, entrepreneurship theory will be connected with network theory by introducing the theory of discovery and exploitation of opportunities (Shane, 2003). One of the most important factors, resource acquisition, will then be debated, and the chapter will be ended by a short literary review on different research in the segment of craft beer.

The reader will be provided with an understanding of the base of this thesis by reviewing some of the main theoretical views within entrepreneurship and networks, on the basis of Schumpeter's theory on entrepreneurship and the opportunity tradition. Grounded in the opportunity tradition, the entrepreneurial process will be divided into a discovery and exploitation phase. These two phases will make up the structure for the empirical findings and analysis in the thesis. Combined, they create the fundament for the research executed in this thesis. A short review of recent research done on craft beer will place this thesis into the research field.

2.1 Entrepreneurship Theory

Entrepreneurship is an old research field. The different definitions to categories entrepreneurship is broad, because it is used within many different disciplines (Nielsen, Klyver, Evald & Bager, 2012). However, it was Schumpeter in his book "*The Theory of Economic Development*" from 1934, who provides the root of today's understanding of entrepreneurship. Thereafter, the entrepreneurship research has broadened further and has attracted researchers from a number of different disciplines and can now be regarded as a multidisciplinary field of research (Sexton & Landström, 2000). However, each discipline seems to have its own view on entrepreneurs, which leads to many ways of looking at entrepreneurship. As a result, the field of entrepreneurship appears as very wide with many different approaches. This thesis addresses the current state of entrepreneurship research by looking at a specific important aspect, networks. There are many ways to assess entrepreneurship, however, there will not be provided a broad overview of this development. First, there will be an introduction of Schumpeter's definition of entrepreneurship, and further

on combining his theory with recent interpretations, by especially focusing on the opportunity tradition.

According to Schumpeter the entrepreneur is an innovator who, by combining existing technology and resources, generates new opportunities and businesses in the economy (Spilling, 2006). The entrepreneurs work may outperform existing organizations and create unbalance in the existing economy. This process is defined as a “creative destruction” when new businesses are being formed and others are shutting down because of the enhanced competition. The creative destruction involves developing new combinations and Schumpeter classifies this in five different types of innovations that define the entrepreneurial act (Spilling, 2006, Kruja, 2012):

1. Product: Introduction of a new product.
2. Process: Introduction of a new production method.
3. Business model: The opening of a new market.
4. Source of supply: Take advantages of new goods or half-manufactured goods in the production.
5. Merges and divestments: The carrying out a new organization of an industry.

The craft beer industry fits in several of Schumpeter’s categories. There is no doubt that the first entrepreneurs were opening a new market in Norway by producing beers with different tastes and experimenting with ingredients. They make different products, although the products are not completely “new” products, they may be viewed as new products to the Norwegian market. They have also been able to break up the organization of the industry by challenging the big industrial breweries.

Israel Kirzner (1978) further developed Schumpeters theories by suggesting that the economy was imbalanced, and an entrepreneur was a person who identified these imbalances and exploited them. This will tend to bring the process towards equilibrium. This has later been developed into the opportunity tradition, which represent a perspective in entrepreneurship research of better understanding the entrepreneurial process. Entrepreneurship is defined as a discovery and exploitation of opportunities to introduce new goods and services, ways of organizing, markets, processes and raw materials (Shane, 2003). Here, opportunities are viewed as the core of the entrepreneurial process, and opening up to entrepreneurial activities may result in multiple outputs (Nielsen et. al, 2012). This tradition views entrepreneurship as

something innovative, which have the potential to change the existing market conditions. The discovery and exploitation of opportunities will be discussed further in the entrepreneurial process chapter (2.3).

2.2 Network Theory

Entrepreneurship theory needs to be placed in a context with the factors that affect the development, and this thesis will use network theory in that matter. Network theory tries to break up the networks into different ties, relations, functions, characteristics, and it is always evolving. This section will describe some of the core concepts within network theory by dividing it into informal and formal networks, and later elaborate some of the key features within the networks.

Entrepreneurs involve a number of different people through the different steps of the process such as local environment, family, friends, organizations and social- or political environment (Spilling, 2006, Borgatti & Foster, 2003). All the different actors create the fundament to the entrepreneurs' network, and the factors that create barriers and opportunities are vital parts in the entrepreneurial process. Every person you know is a part of your network, and could be labelled in relation to what it represents (Prell, 2012).

The theory of entrepreneurship and networks builds on and is a source of traditional social network theory, and was originally developed in sociology studies (Hoang & Antoncic, 2003). The research connecting social network theory with entrepreneurship is quite new in a research context. Some of the first contributors to the field are Birley (1986), Aldrich & Zimmer (1986) and Johannison (1988). Earlier research often focused on the individual entrepreneur, and the environment that affected them was often neglected. Now, the entrepreneurship theory is more complex. The individual entrepreneur often has a set of characteristics placed in a network context, and they function simultaneously in the theory of entrepreneurship and networks. A network is a set of actors connected by a set of ties (Borgatti & Foster, 2003), and the role of the network is not only related to the business formation, but is valid throughout the entire life cycle of the business (Hoang & Antoncic, 2003).

To be able to use the network as an analytical tool, the networks are divided into two main categories in this thesis: formal and informal networks. *Formal networks* are associations of

business or functions within them, and are often separated into two different sub-categories (Foss, 2006). The service sector of network is public and private institutions, which assist the entrepreneur, financially or by providing other resources. This is particular relevant in a Scandinavian context where the public institutions are very strong in the field of entrepreneurship (Johannisson, 1988). The industrial sector of networks is the different actors in parts of the value chain, such as suppliers, distributors and exporters. *Informal networks* is the most important network during the entrepreneurial process (Foss, 2006). The informal network consist of the entrepreneurs' web of relationships, including friends, family, acquaintances etc. They provide important sources of information and knowledge, or contacts that may be helpful in other aspect of a business's development. Informal networks are distinct from formal networks in that they are not officially directed by organizations, and in that the content of their exchanges can be personal, social or work-related (Ibarra, 1993).

An entrepreneur often needs support during the process, and it is common not to have established an appropriate network in the beginning. Since the network is undeveloped, the entrepreneur needs to select his attention, before it consist of actors who could legitimize his or her selections. Increasing network size of contacts may lead to more information, but without considering diversity, it may negatively affect the entrepreneur in significant ways (Granovetter, 1985). Variety is created when the dynamic confrontation by other actors in the network to change the entrepreneurs own visions. There are several ways to "manage" a personal network; as a generator of new ventures, as an evaluator of proposed new projects, or as a safety-net for the launch of the venture (Shane, 2003).

To launch a new business is usually a time-consuming process. There is not a certain recipe to successfully develop a business and it is characterized by trial and error (Johannisson, 1988). It is healthy to have a procedure that allows some mistakes in the venture creation. Thus, the errors made cannot be vital and needs to be minimized. This may be achieved by having a strong network with mentors with experience and knowledge within the field of business creation (Rost, 2011). It will often take time to build a trust relationship that allows this in the personal network.

The network approach described by Johannisson (1988) gives a structure to more general observations on entrepreneurship. These include the importance of network at different stages in the lifecycle of the firm. Entrepreneurs can use their personal network to capture a position in the business world. Relying on trust, relationships will survive even though the business

fails (Johannisson, 1988). This is one of the explanations of how entrepreneurs that have been in business before are more successful in launching a new business. Ventures launched by entrepreneurs without prior experience from entrepreneurship will presumably rely on fewer linkages, and their network resources will have to be supplemented by other abilities.

Argued by Johannison (1988), there are three particular aspects demonstrating the potential of the network; (1) characteristics of the linkages, (2) structure created by the nodes and linkages, and (3) operating properties.

(1) The ties in a personal network are relationships of trust. There is a shared belief from both the actor and the entrepreneur that the relationship will benefit in the long run. By relying on trust relationships, the entrepreneurs can preserve both his or her personality and the originality of his venture. (2) The ties in the network need to relate to different people with a diverse set of knowledge, information and resources. If successful, the various parts of the network can be mobilized, depending on what the entrepreneur is currently handling. (3) According to Johannison (1988), flexibility is the key attribute of networking. The network is activated when the entrepreneur needs help or support.

2.2.1 Key Concepts in Network Theory

Network theory uses the dimensions as the content, character, and characteristics in the structure of the network (Foss, 2006). The networks consist of several attributes discussed by several scholars. The next part of this theoretical framework will give an explanation and discussion of the key terms in network theory. Some of the key network features; *strong* and *weak ties* (Granovetter 1973, 1983, 1985, Birley, 1983, Rost 2011), and *structural holes* (Burt, 1992, Walker, Kogut, & Shan, 1997), will be elaborated in combination with the theoretical framework.

2.2.2 Strong and Weak Ties

The connection between two people is viewed as a tie since it ties two actors together. In 1973, Mark Granovetter published the highly influential sociology paper "*The Strength of Weak Ties*", which made him one of the pioneers in network studies. He stated that: "The strength of a tie is a combination of the amount of time, the emotional intensity, the intimacy, and the reciprocal services which characterize the tie" (p. 1361). The ties can be divided into

three groups - strong, weak and absent - and this thesis will focus on the strong and the weak ties.

Strong ties often consist of relations as family, close friends and relatives, and have greater motivation to be of assistance, and are often more available (Granovetter, 1983). They support the entrepreneurs in every part of the process, and they usually do not need any motivation to function. Friends and family often have the same views and opinions as the entrepreneur. Therefore, Granovetter argues that they do not provide the necessary information needed in the process. However, strong ties are a natural part of an entrepreneur's network, and of great influence in the entrepreneurial process (Rost, 2011).

Weak ties, on the other hand, does not consist of the same trust and reciprocity as strong ties. Weak ties often consist of relations that are characterized as more volatile. They are mostly business connections that the entrepreneur meets in the entrepreneurial phase of the startup process. The actors in this definition are different from the entrepreneur, and gives new information to the entrepreneurial process. They give opportunity to new network clusters, and could give information about loans, contracts, laws and legislations, material resources, and other areas that the entrepreneurs needs (Granovetter, 1973). Rost (2011) argues that weak ties are only beneficial if actors occupy a more central network position.

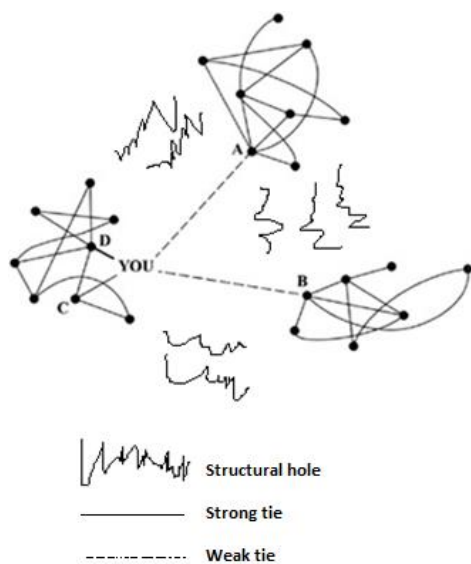
According to Granovetter (1973), weak ties are more likely to link members of different small groups than strong ties because strong ties tend to be concentrated within particular groups. Individuals with few weak ties will lack vital information from distant part of their network and will be too affected by the view of their close friends and family. Without weak ties, any momentum generated will not spread beyond the inner circle (Granovetter, 1983). Rost (2011), on the other hand, states that research tends to overestimate the impact of weak ties. Essentially, strong ties bind groups closer together, and create solid clusters of association. In comparison, weak ties connect these clusters, and facilitate cooperation between clusters (Walker, Kogut, & Shan, 1997). According to Johannisson (1988), new and small businesses have to specialize to control a variety of resources, with both weak and strong ties, in order to handle the problems and options in a complex environment.

2.2.3 Structural Holes

Ronald Stuart Burt released his work “Structural holes: The social structure of competition” in 1992, as an addition to the existing field of network theory. What matters according to Burt (1992), is the number of nonredundant contacts. Contacts are redundant to the extent that they lead to the same people, and provide the same information benefits. Nonredundant contacts are disconnected in some way. Either directly, in sense that they have no connection to each other, or indirectly, in sense that one have contacts that exclude the others.

Burt uses the term *structural hole* to describe the separation between nonredundant actors. As a result of the hole connecting them, the two actors provide network benefits that are additive rather than overlapping. Whether the relationship between the entrepreneur and his actors are strong or weak, it generates benefits in terms of information when there is a bridge over a structural hole. The nonredundant ties are the bridges to other clusters and these bridges are less likely to develop within clusters. In the beginning, people tend to be similar to the entrepreneur until he reaches a sufficiently low level of relationship and begin to bring people from completely different social worlds. They also generate control benefits giving the entrepreneur the advantage in negotiating the different relationship with the actors.

The structural holes generates information benefits, and provide a stronger foundation for theory, and a clearer guide for empirical research (Burt, 1992). He predicts that networks rich



in structural holes allowed entrepreneurial behavior by controlling the form of projects that bring together people from opposite sides of the hole. As Figure 1 shows, there are three classes of structural holes in this network market with bouncing lines: 1) holes between the cluster around contact B and everyone in the strong ties cluster; 2) holes between the cluster around contact A and everyone in the strong ties cluster; and 3) the hole between A and B.

Figure 1. Structural holes (Burt, 1992, p. 27)

2.3 The Entrepreneurial Process

The entrepreneurial process is dynamic and hard to divide into specific phases (Haber & Reichel, 2007). However, many scholars have tried to identify the main phases (Wilken,

1979, Shane & Venkataraman, 2000, Bixy, Sternberg & Stüber, 2012, Witt, 2007, Shane, 2003). It is common to draw parallels to a product life-cycle and describe how the business develops on equivalent ways (Spilling, 2006). In order to structure and organize the findings in the empirical analysis, a theory of separating the entrepreneurial process needs to be introduced. As a continuation of the entrepreneurship theory section, the focus will be on the two phases within the opportunity tradition. Scott Shane's book from 2003 "A General Theory of Entrepreneurship" will be the base of the theory on opportunity tradition.

Opportunities are a key concept of the opportunity tradition, and are based on opportunities that add something new to the world we already know (Nielsen et. al., 2012). To be able to differentiate the entrepreneurial process the opportunities are divided into two different phases, discovering opportunities and exploiting opportunities. When discussing the discovery and exploiting of opportunities, the focus will be on the impact of networks. The next sections will link the opportunity tradition with network theory, presenting different key concepts of networks, which enhance and facilitate entrepreneurship. This section will be ended by providing a more in-depth look at the importance of resource acquisition.

2.3.1 Discovering Opportunities

The reason why some people discover opportunities may be that they are better than others to recognize the specific opportunities, and have better access to information about the existence of the opportunity (Shane, 2003). The networks in this phase is mainly influenced by three factors: previous life experience, knowledge and information search.

Previous life experience may lead the entrepreneur to inside information or knowledge necessary to discover opportunities. That could be because of their former job, education or hobby. It is more likely that a software engineer, who has worked in IT-business, will start a successful mobile application because of his prior experience, knowledge about the market and knowledge to create an application, than a person without that experience. Variation in experience also influences the likelihood of opportunity discovery. People that have had many jobs have diverse or new information that will enhance their chance of being an entrepreneur (Shane, 2003). According to Gnauck, Hart & Pagel (2014) craft breweries often start as a hobby for the entrepreneurs, which later lead them into starting their own brewery. The knowledge and contacts they have gained from their hobby have provided them the necessary motivation, information and knowledge to discover the opportunity to start their own brewery.

Entrepreneurs are more likely to find information that is useful to the discovery process if they want and search for the information. They are also better at searching in places where others do not look, and this information is often found in private, rather than public information (Shane, 2003). There are many ways to attack the information search, taking contact with unfamiliar actors, organizations and people, or trying to take advantage of the already established network. This process is very important in the discovery phase, because it leads the entrepreneurs to decide if he wants to pursue the idea or not.

The common denominator is that the previous life experience and the information search becomes a part of their network in some way. Informal network is an important source of information where people interacts and discovers entrepreneurial opportunities. The structure will influence what type of information they receive, and the quantity, quality and how early they get the information (Shane, 2003). These factors will facilitate the discovery of opportunities by influencing the person's access to information.

If the entrepreneur has ties connecting to a variety of people, it enhances the access to information that facilitates opportunity discovery (Aldrich & Zimmer, 1986). Information in the network could exist of information about locations, employees, potential markets and sources of capital. As Johannisson (2000) argues, the ties need to access people with different sources of information to enhance opportunity discovery. This may lead to non-redundant information that are more likely to get access to the right information necessary for opportunity discovery, people are less likely to get this information from a more homogenous network. Strong ties are especially beneficial to opportunity discovery. They provide entrepreneurs with information that they believe to be accurate, because the ties are trustworthy. If the entrepreneur gets this information before others, it is important that he or she knows that this information is valid, and strong ties are the most reliable in this situation (Shane, 2002).

2.3.2 Exploiting Opportunities

According to Kirzer (1973), after a person has discovered an opportunity, he or she needs to decide whether to exploit it or not. The exploitation of opportunity is uncertain. The information necessary to determine whether an effort to exploit an opportunity will be profitable cannot be known because that information does not come into existence until the entrepreneur pursue the opportunity (Shane, 2003). Research on entrepreneurship has found

many different factors that correlate with engaging entrepreneurial activity. A person exploits an opportunity because he or she believes that the expected value exceeds the opportunity cost either in terms of alternative cost or possible revenue income. The entrepreneurs must believe that they will gain more than they are giving up (Shane & Venkataraman, 2000). Motivation and encouragements towards the decision to exploit often originates from their network. Support from their family and friends are crucial when the entrepreneur decide to establish a business.

There are several individual-characteristics associated with engaging entrepreneurial activities. Research have shown that numerous psychological factors correlate positive with pursuing entrepreneurial opportunities, such as aspects of personality and motives, core self-evaluation and cognitive perspectives (Shane, 2003). The individual perspective and underlying factors are not being discussed in this thesis, although they most definitely are a factor of exploiting opportunity. On the other hand, there are many non-psychological factors that make it more likely for a person to exploit an opportunity of entrepreneurship, such as prior experience, employment status, gender, age, education, marital status, knowledge, social position and social networks (Shane, 2003).

An entrepreneur with the right experience will do a better job at exploiting an opportunity than an entrepreneur that lack that kind of experience. If a person is higher educated, he or she may be more likely to exploit an opportunity and hold more knowledge and information about certain areas. Another aspect is career and start-up experience, which provides useful routes to gathering information and skills that are useful to the exploitation phase. They will obtain more information about entrepreneurship and better to assemble the resources than people who lack this prior experience, education and knowledge (Shane, 2003).

Networks increase the likelihood that people will exploit entrepreneurial opportunities. It is important that the entrepreneur get access to resources and information that facilitates the exploitation process. The strong ties are often a very important factor in this process. Aldrich & Zimmer (1986) stated that people who had more contact with their strong ties in the network were significantly more likely than others to develop a business. Empirical results also argues having a network with strong ties has a higher survival rate (Shane, 2003).

The performance of a new business depends on obtaining information and resources from others, and obtaining resources depends on social interactions. Entrepreneurs with a diverse

and broad social network develop stronger ties to suppliers, obtain information that is more accurate, have better access to financial resources and hire people with more skills than other entrepreneurs (Hansen & Allen, 1992). Brüderl, Preisendörfer, and Ziegler (1992) concluded that new businesses, which received more support from strong ties, had higher three-year survival rates than ventures that had less support from strong ties.

2.3.3 Resource Acquisition

Entrepreneurs confront many different challenges throughout the entrepreneurial process, and each of these challenges requires access to different resources such as capital, knowledge and labor. Although the entrepreneur possesses some of these resources, they often need to be supplemented. This happens by exploiting the resources in the network, and taking advantage of personal contacts within the network. Networks are used to getting access to a variety of resources, and they are vital in the entrepreneurial process. In recent years, particular parts of entrepreneurship research have shifted towards looking at the network as a possible source enhancing entrepreneurship (Shane & Venkataraman, 2000). Central to this perspective is how to improve the resource acquisition, with emphasis on the network relations. With increasing complexity on all fronts, the quality of the network will be essential for entrepreneurs. They also need to focus on these factors to understand how entrepreneurial capabilities can be promoted. Entrepreneurs exchange information and acquires resources from the network, which facilitates the entrepreneur to be able to change and control the environment (Johannisson, 1988).

Networks may lead to necessary resources to start and operate a business. Greve and Salaff (2003) state that small businesses needs to obtain resources or information, and need to be part of a network that can provide these resources. Some resources are acquired most effectively through broad social networks with many structural holes and weak relationships with people, while others resources are easily achieved in dense networks only existing of strong relationships between the actors (Nielsen et al., 2012, Klyver & Hindle, 2007). Another positive feature from several studies of networks concludes that the primary benefit from a network is to be able to share knowledge available within the network and thereby learn from each other (Chaston, 2000). Networks are often dynamic, and how they affect the business depends on the entrepreneur situation at different phases. The challenge for the entrepreneur

is to determine which resources are in demand and develop the network to get hold of those resources (Shane, 2003).

When the entrepreneur is looking for opportunity, he needs non-redundant market information to discover or create new opportunity. This will provide information that could be vital to meet the challenges in the venture creation. In this discovery phase, the entrepreneur needs a network consisting of many diverse people. When the opportunity is identified and the entrepreneur is about to start the organization, the need for different resources appears (Shane, 2003). During this startup phase, there is a demand for advice, support and help with the financial injection. In the vast majority, the founders finance out of their own pocket (Aldrich, 1999). However, friends, family and close contacts may be the ones giving financial help in this phase, and the informal network should therefore consist of many strong relationships. The source of external financing can also come from the formal part of the network including banks, venture capital, firms and government (Shane, 2003).

Obtaining adequate capital is important for several reasons. New ventures with more capital provide a buffer that entrepreneurs can use to respond to different circumstances, they are more likely to survive, grow and become profitable. Businesses with greater access to capital grow faster and become larger, because they can make greater investments and expand more rapidly (Shane, 2003).

After the start-up process, the venture moves forward and depending on type of business, some parts of the network may need to be replaced. New actors need to be included and it is important to once again have a diverse network with many structural holes and weak relationships (Shane, 2003).

2.4 Previous Research on Craft Beer

Several studies explain why the craft beer movement has emerged (Carroll & Swaminathan, 2000, Kleban & Nickerson, 2011, Murray & O'Neil, 2012). In Carroll & Swaminathan's (2000) article "Why the Microbrewery Movement?", it only briefly mentions that networks play a part in the development of this sector. They stated that the beer community is characterized by a redundant social network of self-styled 'experts', including many home brewers. They argue that information flows rapidly and pervasively through this network, without a further investigation on the important influence of networks. Kleban & Nickerson

(2011) gives a broad explanation of different sorts of craft breweries. They focused on the business strategies and give an explanation of underlying factors that have influenced this rapid growth of craft breweries operating in the US market. Surprisingly, networks are not even mentioned in this article.

Some scholars have done research on networks, marketing and craft breweries (Clemons, Gao & Hitt, 2006, Byrne, 2012). These articles take a closer look at how the breweries use networks in terms of getting publicity and enhance their market value. Clemens, Gao & Hitt (2006) state that the craft breweries are more dependent on the internet in the marketing process to create an increased demand for their products.

McGrath & O'Toole (2013) investigated the entire micro-brewing network in Ireland. Their article studies the Irish micro-brewery industry, and identifies and describes the factors that enable and inhibit the development of its network capability. This article describes the current situation in Ireland, though, it does not focus on the entrepreneurial process.

I have not succeeded in identifying research, which focus on networks in the entrepreneurial processes within craft breweries. Murray & O'Neil (2012) strongly suggest in their article "Craft beer: penetrating a niche market" that future research should specifically examine how to target and access this market. This is basically the topic of this thesis, and may contribute filling this gap in the literature. An ongoing debate in the articles has not been recognized in the articles I have read to this date.

2.5 Analytical Framework

In sum, this chapter has documented that entrepreneurship is a complex and wide area of research. The entrepreneurship theory has been lead towards the opportunity tradition of entrepreneurship. Discovering opportunities and exploiting opportunities have been defined as key elements in the entrepreneurial process. This was later linked with network theory, presenting different networks and key concepts of networks. Later, the importance of resource acquisition is debated with roots from the theoretical framework. Entrepreneurship and network theory create a useful fundament in explaining how the entrepreneurial process develops and provides the body for the analytical framework.

The empirical and analytical chapters of this thesis will focus on how the entrepreneurs used their network in the discovering and exploiting phase. Each of these phases has different conditions of important factors to establish a business. Prior experience set the foundation for the discovering of opportunities. To gain the necessary information and knowledge is important in both phases of this entrepreneurship theory, but the content vary in the different phases. When entrepreneurs decide to exploit an opportunity, the motivation and encouragements often comes from their network. In the exploitation phase, the most important factor is resource acquisition, how they are able to find a location, equipment, and labor to start the production.

The theoretical approaches have been used as a foundation for constructing this thesis' research question, as well as the choice of cases and methodological approach. To answer how they have used their network, the focus will be on the different network forms and features presented in the network theory section. This include the informal and formal network and the different ties which connect the entrepreneurs with the people in their network.

3. Methodology

In the following chapter, the choices and procedures in the collecting of empirical data will be explained, as will the procedure of design and analysis. First, qualitative case as a method will be clarified, before elaborating why the particular cases were chosen. Followed by a presentation of the research design and method used to gather and analyze the empirical data. Then narrative interviewing and semi-structured interviews will be introduced.

My own reflections during the collection and analyzing of the research will be presented, as I consider my experience to be important guidelines for my approach. Then, the validity and reliability of the findings will be debated to clarify the strengths, weaknesses and limitation of the research. This chapter will finish by introducing the three cases used in the empirical collection of this thesis, to familiarize the cases to the reader.

3.1 Qualitative Case as Method

Qualitative methodology is used to get an insight of how networks influence the entrepreneurial processes. Qualitative methodology is used to examine a phenomenon which is hard to measure by numbers (Yin, 2009) and this will be conducted by case studies methodology, narrative and semi-structured interviews. A case study is an intensive study of single units for the purpose of understanding a larger class of similar units. Case study was chosen because it is a suitable method in order to explore in-depth nuances of the phenomenon and broadening academic understanding (Baxter, 2010).

The method used in a thesis need to be related to the research question and carefully selected. According to Yin (2009), case studies are the preferred methodology when a) “how” and “why” questions in the research question, b) the investigator has little control over events, and c) the focus is based on a phenomenon within a real-life context. This method fits very well with the research questions, which will explain “how” an event occurred. Since the events already occurred, there are no possibilities to control the variables in the research. The case study is also relevant because the research question seeks to explain a phenomenon by getting detailed information from the entrepreneurs in a real-life context.

3.2 The Access to and the Choice of Case

When I started working on this thesis, several topics were of great interest. One of them was the craft beer industry, which I have been following closely the last years, but only as a consumer. In the preparation phase, I discovered that there were no articles from Norway investigating the emerging of craft beer, in neither entrepreneurship nor network theory. To be able to contribute within a, as far as I know, untouched field of entrepreneurship could be of great interest to several researchers.

Bradshaw and Stratford (2010) states that to conduct in-depth interviews with a small number of the 'right' people will provide significant insights into a research issue. To be able to recognize the 'right' people an exploratory work on different craft breweries was conducted, and it gave me the capacity to begin comprehending the perspectives of participants. It was necessary to get in contact with key individuals, and the most important factor was that they were a part of the entrepreneurial process of the establishment of the brewery. When I contacted the entrepreneurs behind some of the pre-selected breweries, the feedback was surprisingly positive. When the founder of Nøgne-Ø, Kjetil Jikun, called me and told me he would provide me with all of the information I needed for my thesis, the decision of the topic was settled.

It is important to acknowledge the limitation of the research. To get enough empirical data to study, three different breweries was selected in the empirical research, which I view as enough material to achieve an understanding of this sector. Each case has to be carefully selected to either predicts similar results or predicts contrasting results (Yin, 2009). The breweries have similar characteristics; they started independently, they have gone through discovery and exploitation of opportunities, and they are still growing and expanding their production. However, it is always difficult to be able to select the 'right' people based on exploratory work (Bradshaw & Stratford, 2010), and as the thesis developed, I discovered many differences between them, which not always need to be interpreted negatively.

The choice of three cases may not be enough to comprehend the variety in the business as a whole, even though the quality of information is more dependent on the abilities of the researcher than on size of sample, according to Bradshaw and Stratford (2010). Every brewery is unique and their experience in the entrepreneurial process is always different, and they may lack vital information to be able to generalize the craft breweries as a whole. Other limitation of the research will be debated more under the validity and reliability section.

3.3 The Research Design

The research design of this thesis is a comparative case study with a multiple-case design, conducted by narrative interviewing. A multiple case study is a detailed analysis of single cases and may lead to conclusions vital for the thesis (Yin, 2009). Each brewery will be an individual case study, but the study as a whole covers three breweries. The evidence from multiple-case designs is often considered more compelling and robust. By looking at more

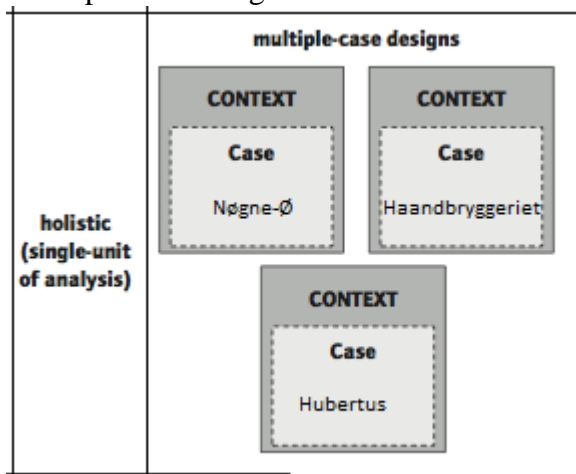


Figure 2: Basic Types of Designs for Case Studies (Yin, 2014, p. 50).

than one brewery, there is a higher chance of collecting relevant data to describe the phenomenon (Smith, 2008). This design is much more time consuming than a regular single-case design, and the results may often lack the in-depth analysis because the time used on each case is reduced. The holistic (single unit of analysis) multiple-

case design described in Figure 2, is the design used in this thesis.

Yin (2014) created a step by step model on how to achieve the objectives within the thesis when using the multiple-case design presented in Figure 3. This model will in detail help to find, structure and analyze my findings to minimize empirical limitations. This will be discussed in detail under the collection of data and the analytical process later in this chapter.

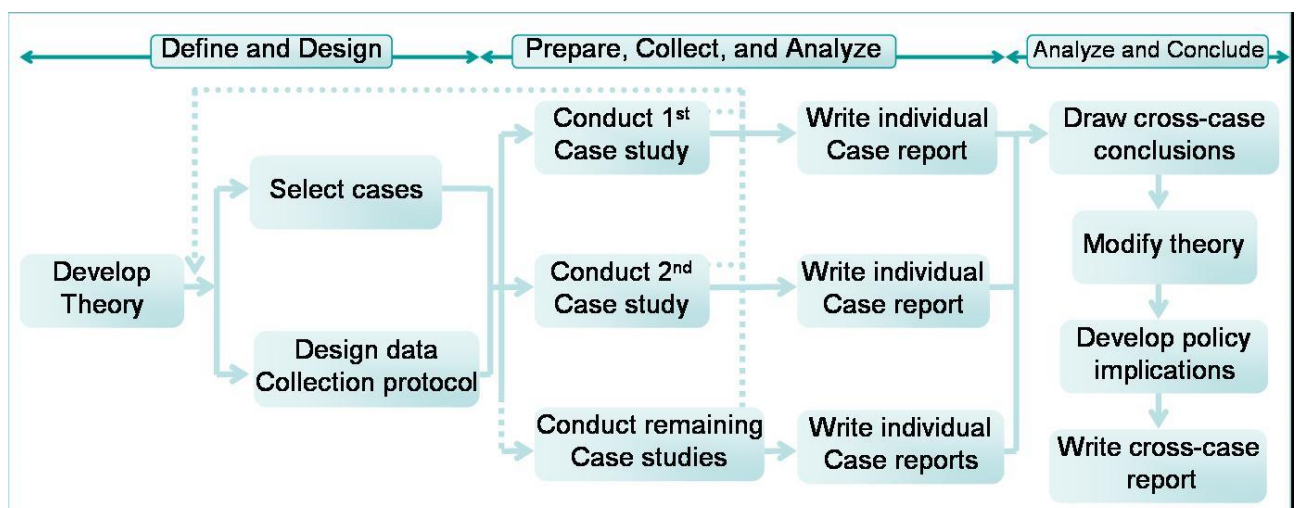


Figure 3: Multiple-Case Study Procedure (Yin, 2014, p. 60).

3.4 Narrative Interviewing and Semi-structured Interviews

The interviews with the entrepreneurs behind the craft breweries will provide a chronological understanding on how they were able to start their business, and is the primary source of information in this thesis. Since the focus is entrepreneurs' networks, it is vital to get an overview of the interactions, motivation, contacts, relations and barriers during the entrepreneurial process. Interviews are often very insightful by providing explanations as well as personal views on a phenomenon. It may give perceptions, attitudes and meanings that numbers cannot give you in the same way (Yin, 2009), and it is the recommended method to get in-depth information on each case study. I will strive to make a personal appearance in interviews, as this is considered to be the most influential form of interviewing. One method to collect this information is to have a narrative perspective on the interviews and conduct them by a semi-structured interview.

Narratives have become a widespread research method in the social sciences and the basic idea is to reconstruct social events from the perspective of informants as directly as possible. The narrative interview encourages and stimulates the interviewee to tell his or her story about significant events in their life and social context (Jovchelovitch & Bauer, 2000). The information gathered from the interview will account for time, place, motives, points of orientation, plans, strategies and abilities from the entrepreneurs perspective.

A preliminary understanding of the main event is necessary to find the gaps that the narrative interview will fill (Jovchelovitch & Bauer, 2000). This involves making preliminary enquiries, reading documents of any particular event regarding the breweries. Gustav Jørgensen released a book "Skummende lidenskap - Fem stabeister og deres øl" in 2013, which briefly goes through the background history of two of the entrepreneurs chosen in this thesis. This book provides information relevant for the preparation for the narrative interview.

According to Gillham (2005), semi-structured interview is the most useful way of conducting a research interview because the structure is balanced with flexibility. In semi-structured interviews it is important to ensure the focus of the topic and have main questions that are asked of all those involved. The interviewer does not need to follow the questions chronologically and some of the questions needs to be open. Probes need to be used when the

interviewer judges whether there is more to be revealed or not. Semi-structured interviews thus provides a balance between structure and openness (Gillham, 2005).

3.5 The Collection of Data

The collection of data was started by collecting information from the entrepreneurs behind each brewery from news articles, blogpost, news stories on web-tv and books. Since the craft beer production in Norway is quite young, there are no academic research discussing it, but two Norwegian books were discovered. The first book, “Skummende lidenskap – Fem stabeister og deres øl” (Jørgensen, 2012), describes the history of the first craft breweries in Norway. Luckily, two of the craft breweries in this thesis are well documented in this book, Nøgne-ø and Haandbryggeriet. The chapters in this book were closely analyzed, to be prepared for the interview and it gave me good background information about the brewery and the entrepreneurs. Approximately one month before the deadline, another book was released “Den norske ølrevolusjonen” by Ivan Hatland, Gahr Smith-Gahrsten and Skjalg Ekeland. This book describes the emergence of Norwegian craft beer and contains interviews with both Nøgne-Ø and Haandbryggeriet. This book has provided vital information, and contributed to fill in some gaps in the history of Norwegian craft beer. Since the book was released after the interviews were conducted, it was not used in the preparation phase.

It was important that the interviews were semi-structured to keep a natural conversation with the brewers to make the interview as dynamic and interactive as possible. The interview was started with a short introduction about myself, the master program at the University of Oslo and my aims and goals for the thesis. That gave the interviews a personal tone and the interviewee a sense of what I was searching for during the interview. A recording software on my computer, called Audacity, were used to record the interviews. In case of an unexpected computer shutdown or bad sound quality, a mobile phone was used as a backup recording device.

The 50 minutes interview with Kjetil Jikun was conducted over the phone because of his busy schedule and the distance between us. It worked out perfectly, and he provided comprehensive answers to the questions that were prepared. The interview with Hubertus Huijs and Rune Eriksen was conducted by personal appearance at their brewery location. Hubertus started his brewery in 2010, and the information search about him and his brewery

was significantly lower than the other two. Therefore, it was vital to get detailed information about his entrepreneurial history. We sat down for 45 minutes for the interview in the second floor of his relatively small brewery. The interview with Rune Eriksen was conducted in Haandbryggeriet's new location in Drammen. He gave me a tour in the brewery and explained how it would turn out when they were finished with the final touches, approximately a week after the visit. We sat down for a 45 minutes interview and he told me, with great passion, about his journey from the very start to the opening of their newest brewery.

3.6 The Analytical Process

After each interview with the entrepreneurs, the transcription of the interview was conducted. The transcriptions were written directly in Norwegian since the interviews were conducted in Norwegian. The choice for this action was justified to minimize the error that could occur when an interview is directly translated into text. Then, the transcription was closely read a couple of times to find similarities and differences in the text, and make a mental picture on how the analytical process should proceed.

The analytical process followed Yin's (2014) "Multiple-Case Study Procedure" presented in Figure 3. First, short summaries were carried out to complete the individual case reports. Then, the individual reports and transcriptions were categorized into parts that fits into the theory to make it easy to start with the empirical chapter. The citations were translated into English from Norwegian as directly as possible, to prevent anything from being left out. The language in the citations is therefore a bit "Norwegian-English" according to the sentence structure, in order to retain the originality of the citations. Later, this process led to the individual case reports in the empirical chapter. The cases were compared to each other in a cross-case analysis. The similarities and differences in this analysis work as a summary in the empirical chapter, and set the bar for the discussion chapter.

3.7 Validity and Reliability

As a researcher, it is important to consider the requirements related to ensure the validity and reliability. They are important to consider throughout both the planning, executing, and gathering of the data material, as well as during the writing process, to ensure that the quality of the research will be as good as possible.

Interviews, as a research method, often lead to some weaknesses in the results. The questions may be poorly articulated and therefore create a bias in the information collected. Interviews often lead to reflexivity because the interviewee gives answers that are according to what he or she believes the interviewer wants to hear (Yin, 2009). The interviewee may also withhold information that can be interpreted negatively about the business. It may also be hard for the subjects to recall and correctly describe the events, since the events happened some years ago.

The reliability of the research refers to ensure that the errors and biases are minimized. The data collected needs to be accurate and concrete. If the reliability is strong, the research can be replicated by other researches if they follow the same procedures in the collecting and analyzing of the data (Yin, 2009). If the theoretical framework is clarified, concrete and easy to understand, the reliability of the findings will be strengthened. This thesis secures the reliability by going through in detail how the data were collected and analyzed in this chapter. A detail description of case study and methodology have clarified these processes, and together with the theoretical description in chapter two, the elements that may lead to weak reliability are minimalized.

The validity of the research is strong when it actually measure what the research question is asking. It requires the researcher to explain how the conclusion can be drawn from the empirical analysis. Yin (2009) has divided validity into three main categories: Internal, construct and external validity. *Internal validity* is achieved when the study can reflect a real-life phenomenon, and take into account if there are other factors that correlate and inflict the results. To achieve this the concepts and definition used are clear, logically formulated and widely approved in the research community. *Construct validity* deals with how subjective the researcher is during the analyzing process. Since the collected data are small and often personal, they may be affected by subjective judgments (Yin, 2009) and I have strived to be as objective as possible throughout the interviews, analysis and discussion. *External validity* is the ability to generalize the findings and always debated regarding case studies. If something correlates in three Norwegian craft breweries, are we able to generalize the findings to the whole industry or other small businesses? Is it possible to draw lines to the development in other countries? Probably not, but by using a multiple-case design it is more likely to find patterns that can be generalized compared to only having a single-case design. That is one of the strengths in a multiple case-design and will enhance the external validity.

However, concerns about external validity have been traded off against the opportunities to gain insight into an, to this date, undocumented phenomenon in Norway.

There are always ethical issues to take into consideration as well. The respondents were provided with a brief description of the thesis in advance, both in the email exchanged and as an introduction to the interview. They received an explanation of how their work and brewery is relevant to the thesis to meet the obligation to inform respondents. All of the participants were asked for permission to use the information about the entrepreneurs and brewery in the thesis, and if the thesis could be published. The entrepreneurs have all approved that the information collected, their full name and the name of the brewery, can be revealed in this thesis.

3.8 The Cases

3.8.1 Nøgne-Ø

Nøgne-Ø was founded in 2002 by Kjetil Jikun and Gunnar Wiig. They are located in Grimstad, a small city in the southern part of Norway. The first batch was brewed in May 2003 after their friend, Roger Evensen, created the technical solutions after about a year of hard, dedicated work. In 2005 they produced 30 000 liters of beer but struggled to sell their beers to the Norwegian market, and had to turn to the international market to keep the wheels rolling. When an investor came with a well-needed financial injection in 2005, they were able to move to a larger location. From 2006 the development of the brewery has exploded. Nøgne-Ø predicts that the total production in 2014 will reach as much as 1.5 million liters. After Hansa Borg bought the stock majority in Nøgne-Ø in 2013, they estimate to sell as much as 5 million liters in 2019 (Hatland et. al, 2014).

3.8.2 Haandbryggeriet

Haandbryggeriet was founded in 2005 by four friends; Jens Maudal, Rune Eriksen, Egil Hilde and Arne Eide. They are located in Drammen, the ninth largest city in Norway. In the beginning, Haandbryggeriet also struggled to reach the Norwegian market, and was saved by the international market demand. In 2008 their sales went through the roof, and they had to move the production to larger location. In 2011 they had to move again to meet the increasing

demand. In 2005 they struggled to sell 20 000 liters of beer and in 2013, the 400 000 liters of production with a total sales of 25 million Norwegian crowns (NOK), was not enough to meet the demand from the consumers (Hatland et. al, 2014). They had to move again. In the fall of 2014 a completely new brewery with the capacity of producing 6 million liters of beer a year was completed.

3.8.3 Hubertus

Hubertus craft brewery was founded by Hubertus Huijs in 2010. He started carefully by renting a 16 square meters basement in Lesja Gjestgiveri. The first year of production he predicted that the production would be 5 000 liter, but the actual number reached 10 000 liters. Hubertus also experience the increasing demands for his products and estimates that the production will reach 15 000 liters in 2014. To be able to start a brewery with a production generating enough income to make the brewery profitable, he made a three million NOK investment in an old school building in 2014. The new location and production will be up and running in 2015 with an estimated capacity of 75 000 liters of beer per year, and he will now hire his first employee.

4. Empirical Findings and Analysis

This chapter presents the three craft breweries and a narrative presentation of their main developments. Their entrepreneurial journey from the very beginning throughout becoming a well-established business will be elaborated. The presentation will be divided in two categories based on the theoretical chapter; discovering opportunities and exploiting opportunities. This empirical analysis holds a somewhat descriptive form to continue with the narrative perspective presented in the methodology. However, the latter parts of this chapter takes a more analytic form when the differences and similarities are compared, with a base in the analytical framework in the theory chapter. In each case, I review how the entrepreneurs have used their networks during the entrepreneurial process to be able to answer research question:

How did the entrepreneurs benefit from their networks in the entrepreneurial process of establishing a brewery?

4.1 Nøgne-Ø

4.1.1 Discovering Opportunities

Kjetil Jikun began experimenting with home brewing in 1996, and quickly became addicted to his new hobby (Hatland et. al, 2014). He started to brew beer for friends and acquaintances, who became interested in his exciting and different beers. It was very difficult to get hold of ingredients, and Jikun believes that every home brewer at that time had to have contacts abroad to get the necessary ingredients (K. Jikun, personal communication, July 18, 2014). Unlike others, he worked as a pilot in SAS, and were able to taste all the different local beer around the world. Jikun often flew to the United States, and carried heavy suitcases with malt from Chicago, Seattle and New York. Especially, the home brewing movement in the United States was something he followed closely (Jørgensen, 2013). His informal and formal network within the craft beer segment were establishing, and continued to grow during his travels. He read every literature he could find on the subject. He tasted and smelled the variety of tastes, and listened to more experienced beer enthusiasts, dedicated home brewers and professional brewers (Hatland, 2014).

“I got to talking with brewers who worked there (at brewpubs) and they gave me a tip that in that bar at that time, there were many brewers to meet, and it was very interesting. I ended up meeting lots of friendly and dedicated people from American craft breweries. That’s how it started” (K. Jikun, personal communication, July 18, 2014).

With his newly gained knowledge, Jikun contacted people in his personal network who could be interested in establishing a brewery, but the time-consuming process to start a brewery prevented many from joining. After a while, he convinced Gunnar Wiig, a home brewer colleague from the same area, to join him to establish a brewery, and they created Nøgne Ø in 2002.

Jikun had established many contacts in the United States in the craft brewing industry. He traveled extensively and visited other breweries that had an enormous impact on the entrepreneurial process. Jikun needed to broaden his informal network to gain the necessary knowledge to establish a brewery, and often contacted other breweries and asked if he could stop by for a short visit, which can be defined as an informal work-related network. The breweries welcomed his visit, and he was rarely rejected. He took pictures and documented their solutions and constructions for inspiration. He tried to find out what mistakes the other breweries had made during their entrepreneurial process in order to prevent him from doing the same mistakes. The openness was quite normal within the craft breweries at that time in the USA, Jikun recalls (K. Jikun, personal communication, July 18, 2014).

“And I had not done what I did; this had certainly never been any success, I think” (K. Jikun, personal communication, July 18, 2014).

Wiig and Jikun invested 100 000 NOK each into the business. They slowly began to build the brewery from scratch, but problems were building up as they were moving on. The materials did not work as they should, they were often broken and they had few resources to buy new materials. The investment quickly vanished and they had to borrow an additional of 100 000 NOK each. The total capital injection reached 400 000, and it was just barely enough (K. Jikun, personal communication, July 18, 2014).

“The people I met during my travels, were the people I asked a lot for advice and looked how their brewery and equipment worked, and I was allowed to come back and ask questions” (K. Jikun, personal communication, July 18, 2014).

This provide evidence on how Jikun used his informal network during this process. Wiig and Jikun were not able to construct the brewery themselves, and Jikun contacted a friend, Roger Evensen, who was a welding engineer (Hatland et. al., 2014). Evensen used 1200 working hours welding the fundament, and May 7, 2003 the first batch was sat (Jørgensen, 2013). Evensen conducted the work on a voluntary basis, and was promised that they would pay him later when the revenue started. He later become one of the owner of the brewery. This process were time-consuming and it drained both resources and motivation from all involved. Most of the materials were purchased from a scrap shop and Jikun had to take a six-week vacation to finish the brewery. Jikun remembers one particular brewery, Nynäshamns Ångbryggeri in Sweden, they had a homemade brewery and it was important for him to see it. They had done exactly what Nøgne-Ø intend to do, create their own solutions in their brewery (K. Jikun, personal communication, July 18, 2014).

“It was because I had seen that work there, and other solutions that I saw that worked there, huh” (K. Jikun, personal communication, July 18, 2014).

And he continues:

“So there was always a reference to someone or a reference to anything we had seen and some we had had a dialogue with and throughout. There was very little that had been taken out of the air. There was always a reason behind everything we did and what we had experienced, when we talked to others about what they had done” (K. Jikun, personal communication, July 18, 2014).

Nøgne-Ø first got their malt and hops from a supplier in England, who become a part of his formal network and again it was a natural cause of his informal network. Nøgne-Ø used the same suppliers as Jikun had seen others successfully use.

4.1.2 Exploiting Opportunities

Jikun, Evensen and Wiig was now the threesome running the brewery and it was a struggle to be able to sell products for 50 000 NOK in order to have the opportunity to VAT register (Jørgensen, 2013). Voluntary work was of great importance, all off the tapping required voluntary effort from helpers, who were recruited from their informal network. The people who helped them in this process were their children, wives, parents, mother's friend,

colleagues, friends and beer enthusiast. If four people were tapping beer, the process lasted for eight hours before all the 700 liters of beer were finished.

“If only Wiig and I would be tapping beers together, we had never reached the goal” (K. Jikun, personal communication, July 18, 2014).

The process was awfully tiring and most of the volunteers could not bear more than one or two nights of work, and often resulted in no desire to return.

“We used up the goodwill and had to constantly contact more and more people to get this to reach the finish. Without voluntary work at that time, we had never succeeded” (K. Jikun, personal communication, July 18, 2014).

Jon Bertelsen, the foremost expert on cognac and whisky in Norway, was one of the first people who initiated the sales of their products. He imported Nøgne-Ø's beer and distributed it in his network. He also won a tender at the Norwegian Wine Monopoly (Jørgensen, 2013), and almost simultaneously at end of 2003, Wiig pulls out of the brewery after having discrepancies with Jikun. Even though they reached the Norwegian wine monopoly, it was a struggle to get the business running.

In 2005 the founders were tired. Their friends and family were exhausted, mainly because they constantly needed to participate in voluntary work to tap, cork and label the beers. There were discussion of shutting down due to low cash flow. One of the solutions was to find an investor and Jikun turned to his network to try to attract an investor. Jikun did not succeeded finding an investor who were willing to invest three million NOK into the brewery. Jikun tried to broaden his formal network, and the new actors he contacted told him that if they had asked for 300 million NOK had been much easier, and three million NOK was too small (K. Jikun, personal communication, July 18, 2014). The determining factor happened when a friend of Jikun, who had followed the brewery, began to convince his relative Anne Hestnesfjellet Trommestad. She had just inherited 100 million NOK from his father after selling Stavanger and Bergen Rørhandel. She invested a large quantity of the money with advice from professionals and decided to put three million NOK into Nøgne-Ø on her own.

“And it came through friends of mine who were related to her... Without self being actively involved” (K. Jikun, personal communication, July 18, 2014).

Again, a person from Jikun`s informal network was hired as a consulting agent, to find solutions to set up the brewery. He was largely customizable by using his own network, where he managed to find alternative solution to build the brewery, such as setting up a malt mill instead of ordering from a professional malt mill company. He knew a producer of an animal ran mills, who were of extremely high quality.

“But it was again a guy I came in touch with as a home brewer. I had met him in a bar in Copenhagen” (K. Jikun, personal communication, July 18, 2014).

Jikun knew him and knew what he stood for. Instead of going out to contact a consulting agency and ask for help, he used a contact he trusted and knew from his personal network. During the process to adapt the new equipment and move to new premises, it required more voluntary effort. Thus, Jikun did not feel the investor had changed anything at that time. When they had settled into the new premises, it took almost one and a half years before they could begin to hire paid workers. They were still depended largely on voluntary effort and help from acquaintances, family and friends. The money does not drive Jikun, and it took ten and a half year before he received a paycheck.

Nøgne-Ø now sell their products at many national grocery stores and is undoubtedly the largest craft brewery in Norway. They predict to produce one and a half million liters of beer in 2014. In the spring of 2014 Hansa-Borg, an industrial beer producer bought the stock majority in the company. This was not well received within the craft beer environment and people are concerned that Nøgne-Ø will lose their innovative playfulness, which characterizes a craft brewery. Jikun, on the other hand, sees this as an opportunity to maximize the potential of his brewery, be more independent and dedicated in the craft brewing process, which is what excites him the most (Harland et. al., 2014).

4.2 Haandbryggeriet

4.2.1 Discovering Opportunities

Jens Maudal, wanted to begin to brew his own beer after he completed his education in England. After a short period of trial and error, he got in touch with Rune Eriksen. Eriksen was also a home brewer and they become a part of the local home brew environment in the Drammen-region called Drammen ølbryggerlag (Jørgensen, 2013). This was a small

community, that gathered once a month tasting each other's brews and talked loosely about establishing a brewery. They arranged tours to famous breweries across Europe (Jørgensen, 2013), and Rune Eriksen was involved most of the trips, although he was not always present at all of the meetings in the community, because he stayed in the nearby city in Asker.

“We got to know each other in the mid 90s and traveled around a lot to drink beer in Europe; taste beer, visiting historic pubs, talk to people and get ideas” (R. Eriksen, personal communication, August 20, 2014).

After a while, Eriksen and Maudal founded Norbrygg together, which is the Norwegian home brewer association. Suddenly, the window of opportunity struck. Maudal inherited his family's old knitting factory, but the market was tough and he had to shut down in 2004. Maudal was now unemployed and ready to bring the ideas they had talked about into action. He could just as well start a business based on voluntary basis than anything else (Jørgensen, 2013). They were lucky to have a venue for their brewery and did not need to invest in a new location to build the brewery.

“But as we began to travel around in Belgium. . . We got ideas, because it was small breweries in operation. We got ideas and thoughts, but it was just getting ideas and thoughts” (R. Eriksen, personal communication, August 20, 2014).

They visited the newly established brewery of Nøgne-Ø in Grimstad and discovered that it was possible to start a brewery in Norway. Jikun has been a great provider of knowledge and information during the entrepreneurial process and was an important actor in their network.

“Also, we have certainly got a lot of advice from Kjetil Jikun . . . changed ideas and given each other advice, kind of brainstorming among the guys we knew” (R. Eriksen, personal communication, August 20, 2014).

They invested 100 000 NOK each, except for Maudal, who invested twice the amount. The financial investments were in total 500 000 NOK, and that was barely enough to start the brewery. In the beginning, they needed to establish a formal network, and cooperate with the government to get a manufacturing license. They discussed the possibility of achieving founding from the government. They may have received support, but according to Eriksen (personal communication, August 20, 2014), it is not easy to get support when you want to start a business in a large city as Drammen.

They renovated the building with help from a friend in their network, who was an electrician. They promised him to pay him later when the brewery was up and running and generated income.

“We had no money to pay an electrician. So, we had to contact an electrician we knew, he helped us cheap. On his spare time, on the afternoon, in the evening, on weekends. So had it not been for the help we have received from a number of craftsmen, we had not succeeded”
(R. Eriksen, personal communication, August 20, 2014).

The first production materials was purchased secondhand from a Company in England, with a capacity of about 900 liters per batch. This company also helped them setting up the brewery equipment. All of the entrepreneurs worked at the brewery on voluntary basis. Their vision was to continue to work on a voluntary basis, and within two years could be paid for their time and money investments (Hatland et. al. 2014).

According to Eriksen (personal communication, August 20, 2014), they were miles away from having the same network as Nøgne-Ø:

“So, we have to figure things out for yourself and it's been a pretty hard school, it really has. We have not had so much (network), we had to figure things out for ourselves”

They got malt from England, hops from an importer in England and yeast from the USA. According to Eriksen (personal communication, August 20, 2014), it was quite easy to get in touch with companies who could provide them with the different ingredients, although there were not a part of their existing network.

4.2.2 Exploiting Opportunities

They started off in a small scale, and everything had to be done manually. They were dependent on volunteers, the participation of their children, relatives and friends when the beer needed to be tapped and bottled. Jens Maudal was the only "employee" as head brewer, of course on voluntary basis (Jørgensen, 2013). The work that had to be done was huge, and it was exhausting in certain periods for the founders. They had to drain their beer in an 800-liter tank and open the tap to fill the bottles manually. Tapping 1 600 bottles of beer requires a lot of working hours of everyone involved.

“Then it was pouring by hand. So it was very dependent on craftsmanship, there was a lot of work. Blood, sweat and tears. It has been like that the entire time really” (R. Eriksen, personal communication, August 20, 2014).

“The first years, say from 2005 to 2010. We worked for free. I have worked for free in the here for 10 years now, in addition to the job I had. Didn’t get a penny. And that’s why we are here today” (R. Eriksen, personal communication, August 20, 2014).

The brewery was named Haandbryggeriet and they slowly turned towards the modern American craft brewing tradition. A tradition characterized by playfulness and experimentation. However, it was hard to get a foothold in Drammen. Some of the local “brown pubs” imported a few cases, without generating any significant sales. The interest, however, was much greater in larger cities such as Oslo, Stavanger, Trondheim and Bergen. The brewery began experimenting with ancient Norwegian farm brew, and created beers that were either loved or hated (Hatland, et. al., 2014).

Haandbryggeriet reached the international market at an early stage, and again, Nøgne-Ø helped them to establish a formal network. The Shelton brothers, one of the most important American import companies of European craft beer, visited Nøgne-Ø in 2006. Daniel Shelton asked Jikun if there were other breweries nearby he could recommend.

“Kjetil recommended us. So it was a good dialogue, it has constantly been that between Kjetil and Jens. And they (Shelton Brothers) came here” (R. Eriksen, personal communication, August 20, 2014).

They entered the Ica Maxi stores quite early, which is a big grocery chain in Norway. However, the expensive price on the product affected the demand within the public, and the sales were not good. Eventually, when they got a semi-automatic tapping machine in place it simplified the process, but they still needed four people to attend the bottling process and again they had to turn to their network for voluntary effort.

“And then it was often we and our children who participated in it. So, and that was tapping and often on a voluntary basis. So, again the family that had to help” (R. Eriksen, personal communication, August 20, 2014).

2011 became the turning point for Haanbryggriet. In the ‘christmas beer’ tests in Verdens Gang and Dagbladet, “Nissefar” and “Nissemor” achieved top ratings (Langset, 2011, Fiske, 2011), which resulted in the beers being torn out from the shelf. The increased demand strengthened the awareness of the flavorful beer from Drammen.

The economic situation today is quite different. They now sell their products in Meny supermarkets, which is a part of the largest grocery chain in Norway, and it sells well. The prediction, according to Eriksen (personal communication, August 20, 2014), within a few years as much as 90% of their production will be sold at regular grocery stores. They decided to move to a new location to meet the increasing demand for their beer. They experienced a 70 percent increase in 2013 and the 400 000 liters of beer produced was not enough and they once again needed to change location. They settled for a 1700 square meters location on Brakerøya in Drammen (Hatland et. al, 2014).

Now the tapping is full automatic and they do not need voluntary effort in the process. When the new brewery is finished, they have spent a total of 15 million NOK in raw investments. They are still using parts of the old equipment and the rest, approximately 10 to 12 million NOK have been down paid with 30 percent and 70 percent is leased. The relationship between Nøgne-Ø and Haanbryggeriet are still strong. Eriksen said that Nøgne-Ø may call because their were empty of ingredients and asked if they could help. Haanbryggeriet then could provide them with the necessary ingredients. *“We help each other”* (R. Eriksen, personal communication, August 20, 2014).

4.3 Hubertus

4.3.1 Discovering Opportunities

Hubertus Huijs moved to Norway in 2007 after he got a job as a music teacher at a school in Lesja, in Oppland County. Hubertus was very fond of beer and knew that beer in Norway were very expensive. He was unhappy with the quality and selection of beer at the local grocery store. The only solution to this problem was to begin to brew his own beer. He had already decided to start to brew his own beer before he came to Norway as a hobby, although he did not have any previous experience. The day before he moved to Norway, he bought a book on how to brew beer, which he read on the way to Norway.

Hubertus had no contacts within the Norwegian home brewing environment. There were not many people in Lesja interested in home brewing, and he had no other option than to turn to the internet to get advice, inspiration, knowledge and information. He became a member of Norbrygg and read most of the discussion threads at their webpage. All knowledge and information were retrieved by reading books and searching the web for information. *“I was self-taught”* Hubertus states (H. Hubertus, personal communication, July 23, 2014). Through discussion threads on various websites, he could discuss, ask questions and exchange knowledge with others involved in the home brewing segment and they became somewhat a network of actors he could rely on.

He received positive feedback from his new friends in Lesja when they tasted his homebrew, and they encouraged him to sell his beer to the public. In 2009 he won the Norwegian championship in home brewing for his Belgic triple beer and from this point he was determined: *“This was a confirmation that I was heading in the right direction”* (H. Hubertus, personal communication, July 23, 2014).

Three years after moving to Norway, he lost his job and became unemployed, in which he replied: *“I have to, I need to go for it now..... I have opportunities here”* (H. Hubertus, personal communication, July 23, 2014). There were not many job opportunities in Lesja, and he started to study the opportunities of starting a brewery. He tried to contact other craft breweries by e-mail, and received a few answers. Unfortunately, many of these breweries were far away from Lesja, and it was time-consuming and expensive to travel around to pay them a visit.

Because of his small network, Hubertus needed to contact local politicians and representatives from the municipalities to establish a formal network. After presenting his business idea, he achieved support and funding from the municipality. One of the Oppland County main objective is the creation of new local businesses to establish new diverse workplaces (Oppland.no, n.d), and this was something Hubertus was able to benefit from. He attended an entrepreneurship course in Otta, arranged by the local municipality. He was forced to write a business plan, got vital knowledge on how to establish a business and other important factors in the entrepreneurial process. He had to contact the local bank, Norwegian Food Safety Authority, Norwegian Customs and The Norwegian Directorate of Health. He interacted by e-mail and phone and was always caution to follow the laws during this process. The formal ties became a vital part of his network.

“I got a grant from the municipality and thought: now I need to go for it” (H. Hubertus, personal communication, July 23, 2014).

The financial resources were retrieved from several different providers. He started carefully establishing a sole proprietorship, and invested 100 000 NOK in the project together with a 55 000 NOK grant from the municipality through the entrepreneurship course. He also received a donation from his mother back home in Holland, as well as a financial loan from the local bank. All together, they contributed to the financial resources needed to start the brewery. He rented a small basement and began to brew the homebrews he previously had succeeded with. He viewed it as a pilot project because he did not want to sacrifice too much.

Support from the family has been a crucial factor for Hubertus. He used most of his savings in this venture creation. *“If you not get any support from your family, then the business will never see the light of day or it could lead to a divorce. I want both a fun job and a wife. It is that easy. It is not possible without support”* (H. Hubertus, personal communication, July 23, 2014).

Hubertus discovered a company in Holland, which exported different commodities and other beer related goods. They had bottles, corks, malt, hops, sugar and everything he needed. The reason why he used this company was mainly a result of the lack of contacts in Norway.

He started to design the labels himself, but the result did not turn out the way he expected. He contacted a professional designer in Oslo and the result was very satisfying. He was lucky to get in touch with Gudbrandsdalsmat, a local food and drink distributor, at a very early stage. They organize and helps with all the practical work on how to get the products out to the stores. According to Hubertus: *“This is equivalent of half the work”*.

4.3.2 Exploiting Opportunities

In the brewery in Lesja the brewing process are dependent on craftsmanship, from tapping, corking and to the labeling. Hubertus do not have the same network as other craft breweries, and to find people to work on a voluntary basis was not easy. However, Hubertus' wife and children participate to work in the brewery during their vacations. When he was asked if his family had been worn out working on voluntary basis, his answer was simple: *“One*

advantage is that I do not have family here. Hehe. So they do not get exhausted” (H. Hubertus, personal communication, July 23, 2014).

After a while, he realized that it was much easier to acquire resources from Norwegian suppliers, because it was very time-consuming to handle the shipping and wait for the customs to declare the goods. He now rely on local produced ingredients, such as barley from a nearby farm in Sjøk. It needs to be supplemented with malt from England and Germany because of the lack of malting suppliers in Norway. In addition, Hubertus have reached a large customer base in the surrounding community by using local, playful names on his beers; Raudøl, Jålebukk, Hafelleøl, Grøftøl and Julbukk. When Hubertus won the VG's Christmas's beer test in 2013 (Langseth & Mikaelson, 2013), the demand for his beer exploded. He got so many requests from people wanting to buy his beer that he predicts he could have sold hundred times more than he produced.

The first batch in 2013 was hundred liters, and Hubertus estimated he would brew 5000 liters the first year in 2013 (H. Hubertus, personal communication, July 23, 2014). However, the liters of beer produced was eventually doubled. At the end of 2014 he predicts that the total amount of brewed beer will reach 15 000 liters. During this period, he realized that in order to expand his production he needed a larger location, a 16 square meters basement was not big enough anymore. He bought an old school in the neighboring municipality. The new brewery in Dovre requires an investment of three million NOK, and again the government establisher programs plays an important part. Innovation Norway covers one third of the capital, while the rest is a loan granted by the same local bank as provided the previous loan. He predicts to brew 75 000 liter a year when the production is up and running.

When the new brewery is up and running, the process will be more automatic. Hubertus has bought a machinery that washes, taps and corks each beer, 24 at a time. According to Hubertus (personal communication, July 23, 2014), there is always going to be a bottleneck in the production, which now might turn out to be the labeling process. The new brewery will generate two full-time equivalent. He is also hiring a carpenter to help him build and form the brewery. The carpenter will later attend the brewing process and learn how to become a brewer. This will almost be a fulltime position and the rest of the hours will be conducted by Hubertus' children during their vacations. The voluntary work is now history, and they will be paid for their contribution at the brewery.

4.4 Cross-case Analysis

In this section, the cases will be set in relation to each other to view if there are any differences and/or similarities between them. This will work as a summary of the empirical findings, and the similarities will be presented first before elaborating on the differences.

4.4.1 Similarities

All of the entrepreneurs involved have quite similar stories to tell about their previous life experience. They all started brewing beer as a hobby, and their motivation was mainly driven by the lack of variety in the Norwegian beer market. Their dedication towards experimenting with ingredients were always a driving force in their passion for brewing. Hubertus brought the economic aspect in his motivation, because he needed a new job which created an income. It is also logical that Maudal had the same motivation, when he turned his family's old knitting factory into a brewery. There is no doubt that they all had a dream to establish a business based on their passion.

The first investments from the entrepreneurs were quite similar. They all invested 500 000 NOK or less in their first brewery. There were not any external financial injecting from others wanting to invest in the business for revenue purposes. The only exception was that Hubertus' financials investments was supplemented by a small grant from the municipality and his mother. Nøgne-Ø and Haandbryggeriet both used their personal network to hire a friend on voluntary basis to help them build the first brewery, whereas Hubertus first brewery was so small that he was able to build it by himself.

Nøgne-Ø was established in 2003 and Haandbryggeriet in 2005. They were both a part of the first craft breweries in Norway and their story correlates in an historic perspective. Since Nøgne-Ø and Haandbryggeriet established at a similar period, they both struggled to sell their products to the national market because of the demand for craft beer. They both needed to establish an international network to export their products to be able to sell enough quantity to get the business running.

They all needed a well-functioning formal network to import the necessary ingredients from international providers, because the market for beer ingredients were not well-established in

Norway. However, they are now starting to use locally produced ingredients to be able to create unique products that can be referred to the “Norwegian heritage”.

Since their first brewery were small and most of the work were done manually, they were dependent on voluntary efforts from their informal network in the production. The process of tapping, corking and labeling needed to be done one by one, and they all used their family, friends and acquaintances during this process. It was an exhausting process and they used up most of the goodwill of everyone involved. Hubertus did most of that work himself, but he received help whenever his family were on visiting Norway. In comparison, the situation today is quite different. The breweries are now the entrepreneurs’ main income provider, and they no longer need to work on a voluntary basis. The breweries are now more or less fully automatic and the dependency on voluntary effort has vanished.

The entrepreneurs invested a tremendous own-effort in the entrepreneurial process, without receiving a paycheck. This was mainly a natural cause of the lack of income during the first years of production. However, Hubertus’ period of voluntary work is significantly shorter than the others and may be the results of the increased awareness of craft beer amongst the public.

Today, the breweries rely on the national market. Nøgne-Ø and Haandbryggeriet sell their products in the largest grocery-cooperations in Norway. Hubertus sells his products through Gudbrandsdalsmat, who help him to provide the products to local grocery stores. Logically, Hubertus do not have a large enough production to sell his products at the same scale as Nøgne-Ø and Haandbryggeriet. They all have gone through an expansion period of their brewery. Haandbryggeriet has moved twice, Nøgne-Ø has moved once and Hubertus is currently settling in a new premises, in order to be able to increase their production. During the construction of the newest breweries, they all needed professional help because they were not able to build the fundament and equipment by themselves.

4.4.2 Differences

The entrepreneurs gained knowledge about brewing beer quite differently. Hubertus read about brewing in books and discussion threads on various websites. He could ask questions and receive answers that were informative and helped him to solve his problems. This was not possible at the time Nøgne-Ø and Haandbryggeriet established. They needed to establish an

international network of actors in search for information and knowledge, and discuss and exchange experience from other Norwegian craft beer brewers.

In terms of information about the establishment of a brewery, Jikun gained his knowledge from contacts he had established internationally. He networked with other brewers on his travels as a pilot, especially in the US. He searched for the information and approached actors that are more experienced, he looked at their solution and how they succeeded to establish a brewery. He was more determined and always had underlying reasons towards the people he encountered. The founders of Haandbryggeriet traveled to European countries, but in opposition, their motivation was not to search directly for information to establish a brewery and form a network. Eriksen and his friends were searching for inspiration in taste and variety to their homebrew products on their international travels. With a different approach, Hubertus read and gained information about building a brewery on websites and books.

The founders had different triggering reasons to why they decided to start a brewery. Maudal of Haandbryggeriet, were suddenly left with a large production building after shutting down his family business. He became unemployed, and Hubertus also lost his job and saw new opportunities in investing his money and time into a new project. Jikun, on the other had decided to start a brewery, even though he was in a full-time position as a pilot.

Hubertus started on his own and did not have any colleges helping him directly during the process. Jikun started with his associate Wiig, and Haandbryggeriet consisted of four friends working together. Hubertus was forced to rely on his own views and did not have any fellow entrepreneurs to discuss issues with.

The entrepreneurs' contact within formal networks was also quite different. Hubertus needed to seek help in other places because of his small informal network, and started a cooperation with the local municipality. They were extremely helpful by providing the necessary resources in the entrepreneurial process. He also received public financial support from the government, a support Nøgne-Ø and Haandbryggeriet did not receive. Nøgne-Ø and Haandbryggeriet only had contact with the public sector to get the necessary licenses and to follow the laws properly. Nøgne-Ø and Haandbryggeriet were both located in cities, while Hubertus started his brewery in a district municipality far from large cities. This could be interpreted in terms that it is more likely to receive public funding for entrepreneurs in the districts of Norway.

When Hubertus established his brewery, the market was matured in terms of knowledge of craft beer. He did not have to struggle to inform and educate his consumers on what they could expect to buy. That has most certainly been a great advantage for him. Hubertus only needed to focus on the national market because the demand for craft beer was stronger during his launch of the products.

5. Discussion

This chapter examines at what has emerged from the empirical findings. In order to answer the research question, the empirical findings will be further discussed and compared to the theory framework presented in chapter two. After analyzing the empirical findings, the discussion is arranged into self-chosen parts. These parts are the aspects that have been influenced the most by networks; previous experience, decision to exploit, knowledge and information search, and acquiring resources.

5.1 Previous Experience

None of the entrepreneurs in this thesis had previous experience with brewing from their education or work place, which often is one of the greatest factors why people become entrepreneurs (Shane, 2003). They all started brewing beer as a hobby, which is consistent with the findings of Gnack, Hart and Pagel (2014). Craft brewing may therefore be viewed as a unique case in entrepreneurship studies. At the time was when the brewing was still a hobby, they started building a network, and the entrepreneurs' previous life experience became a part of their network development.

Eriksen and his friends in Haandbryggeriet were one of the first in Norway to start with home brewing. At this time, the Norwegian home brewers formed a small community in which everyone seemed to know everyone. Eriksen gained experience together with his friends from their local beer club. The ties that connected them were strong and their relationship resulted in a cooperation of the venture creation of Haandbryggeriet, which is a common outcome in networks with strong ties (Shane, 2003). They created Norbrygg and gained a huge network within the national craft beer community, which later Jikun also joined. Norbrygg became vital in the craft beer business, by providing a joint community by, for example, organizing the Norwegian championships. Their webpage is by far the most used information provider for home brewers, which also helped Hubertus in his process to start brewing beer.

Jikun, on the other hand, did not have the same network of craft beer enthusiast. He therefore had to establish an international network when he needed feedback on his homebrews. Jikun interacted with people during his travels and tried to stay in touch with them during the entrepreneurial process. He collected information and combined them to achieve a wider

understanding of craft beer and as Jikun points out: *“That’s how it started”*. He brought his homebrews with him when he traveled, discussed taste, ingredients and the brewing process with his newly established acquaintances. These social ties between Jikun and his international friends can be characterized as weak ties, because they were not as dependent, personal and reliable as strong ties (Granovetter, 1983). Jikun’s network was significantly larger in size than the other cases in this thesis, which created many structural holes. This is viewed as a positive sign, since the structural holes work as a control mechanism (Shane, 2003). He could bring his homebrews to different people who provided him with a different analysis according to their background.

Since Eriksen and his friends were part of the same environment, and worked together in the brewing process, their network lacked structural holes. The connection between them is characterized as strong ties. People with strong ties often belong to the same environment, which leads to equal specifics and opinions on how the process would function and how the homebrew should taste. This caused start-up problems for Haandbryggeriet. They struggled with the yeast they were using, and were not able to identify the mistakes they did in the brewing process. Their network did not consist of enough structural holes, and they could not seek help from other experienced actors. This relates to what Granovetter (1983) concludes, that strong ties often lack vital information, and will be too affected by the views of their close friends. It is important to have a network with weak ties to avoid being caught up in your own preconceptions. In the case of Haandbryggeriet, progress was achieved through trial and error, which is something entrepreneurs need to minimize to succeed in the entrepreneurial process (Johannisson, 1988). However, these errors were not vital enough to prevent the business from being established.

Hubertus tried to approach people in the neighborhood, who brewed beer to become a part of a network of brewers, but it was hard to find people within the local community. He needed to find another platform to form his network and chose the internet. Discussion platforms were a place where he could increase his knowledge, ask for advice and discuss beer-related topics with other home brewers. The Internet played the most important role in getting the necessary information to experiment with brewing craft beer. It is hard to label the actors in the discussion threads as weak ties, or if they actually became a part of Hubertus’ informal network. However, they had the same function as weak ties in a network and were important to his prior experience.

5.2 Decision to Exploit

People use information and their social ties to make decisions (Granovetter, 1985), and the encouragement and motivation often comes from their existing network. Without positive feedback and encouragement from the network, the business rarely will see the light of day.

Jikun presented his homebrews to his network, and many loved his craft beers. Jikun was quite humble and careful when he told his contacts within his network that he was thinking of establishing a brewery. The shift came when people told him: “Sure, you can manage this; it's no problem at all, why not? Simply just do it. Many people have done this before you; do not let modesty stop you” (K. Jikun, personal communication, July 18, 2014). This was the confirmation he needed and decided to consider the opportunities of starting a brewery.

Hubertus got his encouragement from his local community in his informal network. He provided them with samples of his homebrews and they loved his products. They told him that these products could sell to the public, that he should create a brewery and increase his production. Hubertus won the Norwegian championship for his homebrew, which was the recognition he needed to continue his work. From his victory, Hubertus stated that this was a confirmation that he was heading in the right direction. In comparison to the others, Hubertus decision to exploit were also highly affected by his formal tie: the municipality. These encouragements from his informal network, together with the formal tie with the municipality, were vital factors to give him the motivation he needed to believe that he could establish a brewery.

The network of strong ties drove Eriksen and Haanbryggeriet motivation. They depended on each other, and did not use their network in the same way as Jikun. They decided to exploit the opportunities in fellowship without many incentives from their network. The only actor in their network that contributed to the decision to exploit was Jikun who had paved way for Norwegian craft breweries. Both Hubertus and Jikun states that support from their family was crucial towards their decision to exploit.

5.3 Knowledge and Information Search

After deciding to establish a brewery, entrepreneurs need to seek information and gain knowledge about venture creation, which is extremely important to be able to establish a business (Shane, 2003), and the cases in this thesis meets these challenges differently.

Jikun continued to take advantage of his informal network when he decided to start a brewery. He used his previous contacts to seek information and advice. He visited many craft breweries and observed their solution of how they had built their brewery, and he took photos and documented their equipment and solutions. He was fortunate that they were very open and welcomed his visit. Once again, this is an example of the positive contribution of having a wide network with many structural holes. He could compare different breweries and get inspiration to how he could construct the brewery in Grimstad. Networks were a vital part of Jikun's establishment of his brewery, and he believes that if he had used his network and looked at how others created their breweries, his brewery would never have been a success.

Haandbryggeriet obtained a close connection with Jikun, and he helped them a lot in the entrepreneurial process. He had already established a brewery, and his knowledge was vital to their entrepreneurial process. They visited breweries in Europe, but the breweries did not become part of their informal network as weak ties. Therefore, Nøgne-Ø became one of the most important inspiration factors. It is possible to view their connection as a strong tie, since their collaboration was close and present during the whole process, and still is to this day. Their connection does not need any motivation to work, and this is equal to what Granovetter (1973) concludes in his research about the characteristics of strong ties.

Hubertus was not able to search for information and knowledge through his informal network, because it could not provide him with the necessary information. Hubertus tried to contact other national breweries in order to seek advice and help, but they were often very busy and the distance made it time-consuming to pay them a visit. Therefore, he contacted the municipality which turned out to be a wise choice. The information gap he lacked in his informal network was filled with help from the government as a formal tie, and he was eventually able to close many gaps in his network. He thus obtained information his network could not provide him. He gained knowledge about establishing, planning, operating a business, which were vital for him during this period. This provides evidence that the network features are not that important. What matters more is how the entrepreneurs are able to close the gaps in their network.

5.4 Acquiring Resources

One of the greatest challenges for an entrepreneur is to access a variety of resources such as capital and labor throughout the entrepreneurial process (Shane, 2003). It is important for the entrepreneur to use his or her network in this process and view it as a tool to exploit. The entrepreneurs need assistance to construct and finance the breweries, access to building equipment, ingredients and required knowledge. This section will discuss how the networks influenced the construction and financing of the first breweries, and later when they needed to expand their business. It will be finished by highlighting one of the most interesting findings in this study, which is the importance of voluntary work.

5.4.1 The First Brewery

Jikun were not able to establish a brewery on his own, and used his network where he made a request if someone would be interested in joining him. After a while, he eventually got Wiig on board and they continued the entrepreneurial process. Wiig was a fellow home brewer from the local area and a part of Jikuns informal network. Haandbryggeriet did not need to use their network in the same way as Jikun. They agreed to start a brewery together, which emerged from Drammen ølbryggerlag, a network of strong ties. Hubertus, on the other hand, decided to establish his brewery on his own, and did not need to use his network in order to find a working partner. Regarding these findings, the origins of the breweries were very different, and as an outcome, they all approached this early entrepreneurial process differently.

However, in order to construct the brewery they all needed help. Jikun used his informal network and contacted a friend he knew had the knowledge and experience to weld the foundation of the brewery. Their relationship was obviously based on trust, which is a characteristic of a strong tie, since Evensen conducted the work without being paid. Jikun only gave his word that they would pay him later, and he later got ownership in the brewery and started to work there. This correlates with the story of Haandbryggeriet. They had to contact an electrician from their network to work at the location on his spare time, in the evenings and on weekends. They gave him their word that they would pay him eventually, when the revenue started. This is a characteristic of network theory that strong ties provide benefits weak ties never could (Shane, 2003). In addition, Haandbryggeriet established a

formal tie by contacting an English supplier of brewery equipment, which helped them during the process of building the brewery. Hubertus, on the other hand, was more self-oriented in the construction of his first brewery. He continued the method he used when he homebrewed and turned it in a larger scale. Hubertus need for professional workers may be low because he started very small in his production.

The financial investments were overall relatively small, and both Nøgne-Ø and Haandbryggeriet used their own financial resources to invest in their first brewery. Hubertus was also determined on financing the brewery himself. Strong ties are often vital during the start-up process, and Hubertus was able to get a contribution from his mother in Holland, which is common in a strong tie such as family (Shane, 2003). Hubertus also received a small donation from the local municipality as a part of the entrepreneurial course he attended, which correlates with the findings of Johannison (1988) who states that Scandinavian countries especially need to influence the political regime.

5.4.2 Expanding the Brewery

Jikun needed an investor in 2005 to build a new brewery and invest in more modern and automatic equipment. He struggled to attract an investor even though he used his large network. Suddenly, an interesting situation occurred when he was not able to find an investor. The people in his network had started to work for him, convincing acquaintances to invest in his business without getting incentives from Jikun. He did not have any contact with Trommestad before she decided to invest; it was a person in his network who convinced her. This is another example of the importance having a network with structural holes that leads to a variety of people. This correlates with Hansen and Allen's (1992) findings that having a broad social network gives better access to financial resources.

Hubertus took advantage of his formal network when he needed to move to another location. He was fortunate to continue to work with the local political community, which led Innovation Norway to cover one third of his total investment. Even though it was a formal tie, he was able to use them once more in order to help him expand. According to Foss (2006), the public institutions that assist the entrepreneurs in the entrepreneurial process, is a quite unexplored field of research, Haandbryggeriet did not need any external investments, and they were fully financed by loans and own contributions.

Hubertus used his informal network when he encountered a local carpenter who was interested in his brewery and the craft beer industry. He wanted to start to work with something different than carpentry, and agreed with Hubertus that he would become his business companion. Hubertus is going to educate him to become a brewer and teach him everything about the brewing process. Jikun hired a person he had encountered during his travels as a home brewer, as a consulting agent to construct the new brewery. He was yet again a person from his network of weak ties, which he trusted and knew was up for the task, and he used his own personal network to gain the necessary resources to build the brewery at a low cost. Haandbryggeriet used their international network to contact breweries in England in order to find a suitable connection within the industrial sector of networks. This led them to invest in a German brewery supply company, who helped them construct their newest brewery. This is another example of the strength of weak ties to access necessary resources (Granovetter, 1973).

5.4.3 Voluntary work

The craftsmanship that goes throughout the brewing process is massive and it is easy to understand the origin of the word ‘craft beer’. One of the most fascinating parts of the empirical findings is the huge amount of voluntary effort every brewery had to rely on, both by the entrepreneurs themselves and the people in their network.

Jikun stated that if he and Wiig were the only ones tapping their beer, their brewery would never have been successful. The work was exhausting and boring for the involved actors, and they constantly needed to contact new persons in their informal network who might be interested in working for free. Haandbryggeriet also included their family and children in the tapping process and was totally dependent on help from outsiders. Jikun points out that he had never succeeded without volunteers. The same could be said about Haandbryggeriet. Hubertus received help from his family every time they came to visit. Hubertus actually stated that his family was “fortunate”, if they had lived in Norway they probably would have had to contribute more. Eriksen describes the work quite correctly: “Blood, sweat and tears”.

The craft breweries may be a special case in terms of the need for volunteers, in comparison to other newly established businesses. Nøgne-Ø and Haandbryggeriet were totally dependent on using their network and attracting enough labor to keep the wheels rolling, but there are

differences between the breweries. Hubertus, on the other hand, was not that dependent on voluntary work, which might be an outcome of small production quantity.

Jikun did not become an entrepreneur to get rich. Ten years passed before he received his first paycheck from his business. The entrepreneurs of Haandbryggeriet worked without a salary the first five years of production. According to Eriksen, this was one of the reasons to why they became so successful. Hubertus, as a single entrepreneur, did not need to work for free for a long period of time. The reason for that may be that the craft beer business was more mature at the point of his establishment. He did not have to use his time on educating and promoting his beers to possible importers. In addition, Gudbrandsdalsmat was hired as a distributor and he had more time to deal with the tapping, corking and labelling.

6. Conclusion

This thesis has sought to contribute to the literature by applying an entrepreneurship perspective to network theories with evidence from the Norwegian craft beer industry. This was executed in order to explore the main network characteristics of the industry, and how they were used. With emphasis on qualitative interviews, the impacts of networks have been mapped based on the entrepreneurial process of the opportunity tradition, in order to answer the research question: *How did the entrepreneurs benefit from their networks in the entrepreneurial process of establishing a brewery?*

The entrepreneurs' prior experience creates the foundation of the entrepreneurial process, and is where the network begins to develop. As a continuation of their prior experience, they gained knowledge and information from their network about the brewing process. Further on, this thesis provides evidence that networks are vital part of an entrepreneur's decision to exploit opportunities and actually becoming an entrepreneur. The entrepreneurs then used their network of actors to get inspiration, information, knowledge, asking for advice and help, and provide human resources to construct the brewery. When the brewery was established, the entrepreneurs took advantage of their existing network. They used their friends, family and acquaintances to help by doing voluntary work at the brewery, a vital part of their road to success.

This thesis present evidence that informal networks of strong and weak ties are used differently throughout the entrepreneurial process. Strong ties have positive impact on gaining information, knowledge and resources. They have also provided the entrepreneurs with vital voluntary efforts in both establishment and the production phases. In addition, the weak ties also provide many different positive features in acquiring resources. They were important in the knowledge and information search in the discovery phase, in terms of getting ideas and hold of professional workers in construction of the breweries. There exist correlating results of positive impacts of having structural holes in the network. They provide the network with diversity and enhance the broadness of the network. The impact of formal networks where also of significant importance. Only one entrepreneur was able to take advantage of financial help from public organizations. However, the formal network is still the fundament of suppliers, exporters, distributors and a vital factor of the latter part of the entrepreneurial process.

In sum, all the entrepreneurs presented in this thesis had different networks with various characteristics, and all the entrepreneurs benefit from their network differently. Despite these differences, they all succeeded in establishing a brewery. When the network lacked necessary actors, the entrepreneurs managed to broaden it in order to get access to necessary resources in the different phases of development. The positive impact of different features of the network enhance and facilitate the resource acquisition, and there is not a certain recipe on how to benefit from the network.

6.1 Limitations

An obvious limitation of this study is that networks only play a part in the establishment of the breweries, and other factors may as well correlate and explain how they were able to establish their breweries. In addition, this research pays a visit to entrepreneurs behind three craft breweries. There is possible, but very difficult, to have a representative sample in only one study, because it affects the generalization ability. Additionally, craft breweries are unique in the way they rely on craftsmanship, and the results may not be very transferable to other industries.

The empirical data collected are highly affected by the entrepreneurs' own views and experience. As a result of events taking place a while ago, the information may not be correctly recounted by the interviewee. The time limiting process of a master's thesis, and the small number of cases investigated, may result in a too small amount of empirical data to analyze. The entrepreneurs' chronological development is probably not completely mapped, and some points may be left out in the collected data material.

6.2 Suggestions for Further Research

First, natural continuation of this thesis could be to emphasize on the voluntary work conducted by actors in the network, or the tremendous own-efforts executed by the entrepreneurs. To conduct a quantitative research and view exactly to what extent they actually had to rely on voluntary work, or how many working hours an entrepreneur has to conduct before the business even begins to generate an income, could be of interest within the research field.

Secondly, another aspect emerging from the interviews, although it is not debated in this thesis, is that the craft beer industry are mostly consumer driven. People are using blogs, and web applications to rate and discuss each brew. The consumers' impact towards the products are of unique importance in the craft beer industry, and something consumers rely increasingly on today, before they buy new products. This new exciting development could be interesting to examine for researchers.

References

- Aldrich, H., & Zimmer, C. (1986). Entrepreneurship through social networks. University of Illinois. Retrieved from http://www.researchgate.net/profile/Howard_Aldrich/publication/228264225_Entrepreneurship_Through_Social_Networks/links/02e7e519547ccc47a9000000?origin=publication_detail
- Bradshaw, M. & Stratford, E. (2010). Qualitative research design and rigour. In Hay, I. (eds.), *Qualitative research methods in human geography* (pp. 81-97). Oxford university press.
- Baxter, J. (2010). Case studies in qualitative research. In Hay, I. (eds.), *Qualitative research methods in human geography* (pp. 81-97). Oxford university press.
- Birley, S. (1986). The role of networks in the entrepreneurial process. *Journal of business venturing*, 1(1), 107-117.
- Byrne, J. V. (2012). Influencing a humanized brand perception for craft breweries through the use of Social Judgment Theory. Retrieved from <http://www.visuallighthouse.com/VL/wp-content/uploads/2012/08/Villalta-Jessica-Capstone-FINAL.pdf>
- Burt, R. (1992). *Structural holes: The social structure of competition*. Cambridge: Harvard.
- Brixy, U., Sternberg, R., & Stüber, H. (2012). The selectiveness of the entrepreneurial process. *Journal of Small Business Management*, 50(1), 105-131.
- Brüderl, J., Preisendörfer, P., & Ziegler, R. (1992). Survival chances of newly founded business organizations. *American sociological review*, 57(2), 227-242.
- Carroll, G. R., & Swaminathan, A. (2000). Why the microbrewery movement? Organizational dynamics of resource partitioning in the US brewing industry1. *American Journal of Sociology*, 106(3), 715-762.
- Chaston, I. (2000). Organisational competence: Does networking confer advantage for high growth entrepreneurial firms? *Journal of Research in Marketing & Entrepreneurship*, 2(1), 36-56.
- Clemons, E. K., Gao, G. G., & Hitt, L. M. (2006). When online reviews meet hyperdifferentiation: A study of the craft beer industry. *Journal of Management Information Systems*, 23(2), 149-171.
- Coviello, N., & Munro, H. (1997). Network relationships and the internationalization process of small software firms. *International business review*, 6(4), 361-386.

- Fiske, R. R. (2011). *God jul for «Nissefar» og «Nissemor»*. In dagblade.no. Retrieved 12.08.2014 from <http://www.dagbladet.no/2011/10/28/tema/ol/oltest/juleol/olakademiet/18801871/>
- Eriksen, R. (2014, 20 August). Personal interview.
- Foss, L. (2006). Entreprenørskap og nettverk. In Spilling, O. (Eds.), *Entreprenørskap på Norsk* (pp. 193-214). Bergen: Fagbokforlaget Vigmostad & Bjørke AS.
- Garshol, L. M. (2014). *Norwegian craft beer 2013*. Retrieved 01.04.2014 from <http://www.garshol.priv.no/blog/277.html>
- Gillham, B. (2005). *Research interviewing: The range of techniques: A practical guide*. McGraw-Hill International.
- Gnauck, B., Hart, C., & Pagel, L. (2014). Blackrocks: Craft brewing – from hobby to business: Applying strategic management to the small firm. *Journal of Business Case Studies (JBCS)*, 10(2), 103-120.
- Granovetter, M. (1973). The strength of weak ties. *American journal of sociology*, 78(6), 1360-1380.
- Granovetter, M. (1983). The strength of weak ties: A network theory revisited. *Sociological theory*, 1(1), 201-233.
- Granovetter, M. (1985). Economic action and social structure: the problem of embeddedness. *American journal of sociology*, 91, 481-510.
- Greve, A., & Salaff, J. W. (2003). Social networks and entrepreneurship. *Entrepreneurship theory and practice*, 28(1), 1-22.
- Hansen, E. L., & Allen, K. R. (1992). The creation corridor: Environmental load and pre-organization information-processing ability. *Entrepreneurship Theory and Practice*, 17, 57-65.
- Haber, S., & Reichel, A. (2007). The cumulative nature of the entrepreneurial process: The contribution of human capital, planning and environment resources to small venture performance. *Journal of Business Venturing*, 22(1), 119-145.
- Hambro, S. (2013). *Norges første ølsommelier*. Retrieved 10.08.2014 from <http://www.dn.no/d2/2013/04/05/norges-forste-olsommelier>
- Hatland, H. I., Smith-Gahrsen, G. & Ekeland, S. (2014). *Den norske ølrevolusjonen – Historiene om de norske bryggeriene*. Kagge Forlag AS, Oslo.
- Häuberer, J. (2011). *Social Capital Theory: Towards a Methodological Foundation*. VS Verlag für Sozialwissenschaften.

- Helsedirektoratet (1989). *Lov om omsetning av alkoholholdig drikk m.v (alkoholloven)*. Retrieved 23.09.2014 from <http://lovdata.no/dokument/NL/lov/1989-06-02-27>
- Helsedirektoratet (1999). Om opphevelse av ølloven og endringer i alkoholloven og arveavgiftsloven. Retrieved 02.10.2014 from <http://www.regjeringen.no/nb/dep/fin/dok/regpubl/otprp/19981999/otprp-nr-66-1998-99-.html?id=120854>
- Helsedirektoratet (2008). *Håndbok i alkoholloven m.v. Rundskriv IS - 5/2008 Lov om omsetning av alkoholholdig drikk m.v.* Retrieved 20.09.2014 from <http://helsedirektoratet.no/publikasjoner/handbok-i-alkoholloven-mv/Publikasjoner/handbok-i-alkoholloven-mv.pdf>
- Hoang, H., & Antoncic, B. (2003). Network-based research in entrepreneurship: A critical review. *Journal of business venturing*, 18(2), 165-187.
- Hubertus, H. (2014, July 23). Personal interview.
- Ibarra, H. (1993). Personal networks of women and minorities in management: A conceptual framework. *Academy of management Review*, 18(1), 56-87.
- Innovation Norway (n.d). *Bedriftsnettverk*. Retrieved 27.05.2014 from <http://www.innovasjon Norge.no/no/Bygg-en-bedrift/Klynger-og-bedriftsnettverk/Bedriftsnettverk/#.U4RIQHY4VaQ>
- Jikun, K. (2014, July 18). Telephone interview.
- Johannisson, B. (1988). Business formation - a network approach. *Scandinavian journal of management*, 4(3), 83-99.
- Jovchelovitch, S., & Bauer, M. W. (2000). Narrative interviewing. In Bauer, M. W., & Gaskell, G. (Eds.). *Qualitative researching with text, image and sound: A practical handbook for social research*. (pp. 57-74). Sage.
- Jørgensen, G. (2013). *Skummende lidenskap - Fem stabeister og deres øl. Fem bryggere. Fem bryggerier. Nøgne Ø, Haandbryggeriet, Ægir, Kinn og Lervig. En bok om lidenskap, personlighet og øl*. Biebere forlag.
- Kirzner, I. M. (1978). *Competition and entrepreneurship*. University of Chicago press.
- Kleban, J., & Nickerson, I. (2011). The US craft brew industry. *International Academy for Case Studies*, 18(1), 33-38.
- Klyver, K., & Hindle, K. (2007). The role of social networks at different stages of business formation, small enterprise research, *The Journal of SEAANZ*, 15, 22-38.
- Kruja, M. A. (2012). Entrepreneurship, knowledge, innovation and sustainable development. *Mediterranean Journal of Social Sciences*, 3(6), 21-25.

- Langset, M. (2011). *Vi har testet 56 typer juleøl!* In vg.no – Mat og Drikke. Retrieved 12.08.2014 from <http://www.vg.no/forbruker/mat-og-drikke/vi-har-testet-56-typer-juleøl/a/10024366/>
- Langset, M., & Mikalesen, H. (2013). *Test av årets juleøl.* In vg.no – Pluss. Retrieved 14.08.2014 from http://pluss.vg.no/2013/11/29/1443/1443_22648764
- Loureiro, M. L., & Hine, S. (2002). Discovering niche markets: A comparison of consumer willingness to pay for local (Colorado grown), organic, and GMO-free products. *Journal of Agricultural and Applied Economics*, 34(3), 477-488.
- McGrath, H., & O'Toole, T. (2013). Enablers and inhibitors of the development of network capability in entrepreneurial firms: a study of the Irish micro-brewing network. *Industrial Marketing Management*, 42(7), 1141-1153.
- Murray, D. W., & O'Neill, M. A. (2012). Craft beer: Penetrating a niche market. *British Food Journal*, 114(7), 899-909.
- Nielsen, S. L., Klyver, K., Evald, M. R., & Bager, T. (2012). *Entrepreneurship in theory and practice – paradoxes in play*. UK: Edward Elgar Publishing Limited
- Norbrygg (2000). *Resultatliste – kortversjon*. Retrieved 27.08.2014 from <http://norbrygg.no/index.php/konkurranser/27/91-resultatliste-kortversjon>
- NRK.no (2013). *Ølbevisste nordmenn*. (TV-program). Retrieved 16.09.2014 from http://www.nrk.no/video/olbevisste_nordmenn/C3F4E9B61E964541/emne/øl/
- NRK.no (2014). *Forbrukerinspektørene – 05.03.2014*. (TV-program). Retrieved 06.07.2014 from <http://tv.nrk.no/serie/forbrukerinspektoerene/mdhp11001014/05-03-2014>
- Ottósson, H., & Schøtt, T. (2011). Entrepreneurs' social capital enhancing performance and venture advancement. In Borch, O. J., Fayolle, A., Kyrö, P., & Ljunggren, E. (Eds.), *Entrepreneurship Research in Europe: Evolving Concepts and Processes* (pp. 134-152). Massachusetts: Edward Elgar Publishing, Inc.
- Oppland.no (n.d). *Mulighetenes Oppland – regional planstrategi 2012-2016*. Retrieved 04.09.2014 from http://www.oppland.no/Documents/Styringsdokumenter/Oppland_regional_planstrategi_2012-2016-web.pdf
- Prell, C. (2012). *Social network analysis: History, theory and methodology*. Sage publishing.
- Rost, K. (2011). The strength of strong ties in the creation of innovation. *Research Policy*, 40(4), 588-604.
- Serck-Hanssen, S. (2012). *Involvering og medvirkning – En forutsetning for å skape resultater i Ringnes*. Retrieved 07.07.2014 from http://konferanse.info/modules.php?op=modload&name=PagEd&file=index&p_deliver=media&m_id=447

- Sexton, D. L., & Landström, H. (2000). *The Blackwell handbook of entrepreneurship*. Blackwell Business.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of management review*, 25(1), 217-226.
- Shane, S. (2003). *A general theory of entrepreneurship: The individual-opportunity nexus*. Edward Elgar Publishing.
- Spilling, O. (2006). *Entreprenørskap på Norsk*. Bergen: Fagbokforlaget Vigmostad & Bjørke AS
- Swaminathan, A. (1998). Entry into new market segments in mature industries: Endogenous and exogenous segmentation in the US brewing industry. *Strategic Management Journal*, 19, 389–404.
- Walker, G., Kogut, B., & Shan, W. (1997). Social capital, structural holes and the formation of an industry network. *Organization science*, 8(2), 109-125.
- Wilken, P.H. (1979). *Entrepreneurship: A comparative and historical study*. NJ: Ablex.
- Witt, P. (2004). Entrepreneurs' networks and the success of start-ups. *Entrepreneurship & Regional Development*, 16(5), 391-412.
- Yin, R. K. (2009). *Case study research: Design and methods* (3rd ed.). Sage Publications inc.
- Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). Sage Publications inc.
- Young, T. (2013a). *Årets ølnyheter 2012*. In olportalen.no. Retrieved 23.03.2014 from <http://olportalen.no/2013/01/11/nye-ol-i-2012/>
- Young, T. (2013b). *Mangfoldet tilbake*. In olportalen.no. Retrieved 31.03.2014 from <http://olportalen.no/2013/04/28/mangfoldet-tilbake/>
- Young, T. (2014). *Resultater fra NM i hjemmebrygg*. In olportalen.no. Retrieved 27.08.2014 from <http://olportalen.no/2013/04/28/resultater-fra-nm-i-hjemmebrygging/>
- Øystå, Ø. (2009). *Drikkeskikker*. In Store norske leksikon. Retrieved 03.04.2014 from <http://snl.no/drikkeskikker>.

Appendix 1 – List of interviewees

Date	Name	Position	Company
18.07.2014	Kjetil Jikun	Head brewer/Owner	Nøgne-Ø
23.07.2014	Hubertus Huijs	Head brewer/Owner	Hubertus
20.08.2014	Rune Eriksen	Marketing Manager/Owner	Haandbryggeriet

Appendix 2 – Interview Guide

(Bakgrunn, informasjonssøk, tidligere erfaring)

1. Hvordan oppsto fasinasjonen for håndverksøl, og hvordan/når startet du å brygge Håndverksøl?
2. Hvordan tillærte du deg kunnskapen om håndverksøl?
- alene- via kontakter – venner – familie – andre?
3. Hvem vil du si var mest viktig for deg i denne perioden?
- mtp skaffe informasjon – tilegne seg kunnskap.
4. Hvordan vil du beskrive nettverket ditt innenfor håndverksøl i denne perioden?
5. Brukte du nettverket aktivt for å innhente informasjon om bryggeprosessen?

Fra idé til oppstart (oppdage muligheter)

1. Når først kom du på tanken til å starte et bryggeri?
- alene eller sammen med andre?
3. Hvordan oppdaget du mulighetene til å starte et bryggeri?
4. Hvordan brukte du dine tidligere erfaringer i denne prosessen?
5. Hvordan fikk du informasjon om at det eksisterte en slik mulighet (fra hvem)?
6. Når du så at muligheten var tilstede, hvordan fortsatt du prosessen?
7. Hvilke personer var du i kontakt med under denne prosessen?
8. Hvordan hjalp de deg på veien?
9. Hvordan brukte du nettverket du hadde opprettet deg i denne perioden?
10. Hvordan søkte du etter relevant informasjon om å starte et bryggeri?
11. Hvem tok du kontakt med?
12. Hvordan vil du beskrive hvordan nettverket ditt så ut på dette tidspunktet?
13. Av de personen som betydde mest i denne perioden, hvordan vil du beskrive relasjonen du hadde med de?

Utnytte mulighetene

1. Hvor viktig var nettverket etter at du først bestemte deg for å starte et bryggeri?

2. Hvilke nye aktører måtte du kontakte i denne perioden?
3. Hva var det vanskeligste under etableringsfasen?
4. Fikk du hjelp til å løse disse problemene?
3. Hvilke personer var viktigst i denne perioden?
4. Hvordan utviklet nettverket ditt seg mot ferdigstilling av bryggeriet.

Ressurser:

1. Hvordan brukte du nettverket til å få tak i ressursene du trengte?
2. Hvem samarbeidet du med i denne prosessen?
3. Hvilken personer var viktigst?
4. Trengte du å få tak i nye kontakter til nettverket for å få tilgang til de relevante ressursene?

Finansiering:

1. Hvordan finansierte du bryggeriet?
2. Hvordan benyttet du deg av nettverket til å få tak i kapital?
3. Hvor viktig var nettverket for å få tak i midlene?